STRATEGIC MANAGEMENT OF CONSERVATION AREAS: A SYSTEMS THINKING APPROACH TO SUSTAINING COMPLEX MULTI-STAKEHOLDER ORGANISATIONS

by

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DEDICATION

To Dylan and Shannon

“Our deepest fear is not that we are inadequate. Our deepest fear is that we are powerful beyond measure. It is our light, not our darkness that most frightens us. We ask ourselves, Who am I to be brilliant, gorgeous, talented, and fabulous? Actually, who are you not to be? You are a child of God. Your playing small does not serve the world. There is nothing enlightened about shrinking so that other people will not feel insecure around you. We are all meant to shine, as children do. We were born to make manifest the glory of God that is within us. It is not just in some of us; it is in everyone and as we let our own light shine, we unconsciously give others permission to do the same. As we are liberated from our own fear, our presence automatically liberates others.”

Marianne Williamson (1992:165)

DECLARATION

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STRATEGIC MANAGEMENT OF CONSERVATION AREAS: A SYSTEMS THINKING APPROACH TO SUSTAINING COMPLEX MULTI-STAKEHOLDER ORGANISATIONS

I declare that the above thesis is my own work and that all the sources that I have used or quoted have been indicated and acknowledged through complete references.

I further declare that I submitted the thesis to originality checking software and that it falls within the accepted requirements for originality.

I further declare that I have not previously submitted this work, or part of it, for examination at Unisa for another qualification or at any other higher education institution.

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ABSTRACT

Land under conservation is critical for biodiversity. South Africa has not achieved the Aichi 11 biodiversity target, which is set to allocate 17% of terrestrial land as protected areas by 2020. South Africa has, however, been an example, globally, how private conservation can fill the gap. It is essential to optimise how conservation businesses strategically plan for long-term financial and environmental sustainability taking into account complex environmental, societal, and industry variables to keep conservation areas viable under financial pressure. An inductive qualitatively driven concurrent mixed-method research design is followed and results synthesised using a systems thinking approach. The study investigates contemporary generic strategic planning frameworks such as the Porter's five forces model but found them to have limited use in the conservation tourism industry. The critical variables conservation area managers need to include in their strategic planning are classed in five significant categories, namely environmental, societal, economic, industrial, and business variables. The research proposes a strategic planning framework which includes a strategic planning and iterative phase, taking into account the interrelatedness of the significant variables.

Keywords: strategy, planning, conservation, tourism, South Africa, management, environment, industry, society, business.

OPSOMMING

Grond onder bewaring is van kritieke belang vir biodiversiteit. Suid-Afrika het nie die Aichi 11-biodiversiteitsdoelwit bereik wat daarop gemik is om teen 2020 17% van die terrestriële grond as beskermde gebiede te verklaar nie. Suid-Afrika was egter wêreldwyd ’n voorbeeld van hoe privaat bewaring die leemte kan vul. Dit is noodsaaklik om die wyse waarop bewaringsondernemings strategies beplan vir langtermyn finansiële en omgewingsvolhoubaarheid te optimaliseer, met inagname van ingewikkelde omgewings-, samelewings- en nywerheidsfaktore om bewaringsareas onder finansiële druk lewensvatbaar te hou. ’n Induktiewe kwalitatief-gedrewe gelyktydige gemengde-metode navorsingsontwerp word gevolg en resultate met behulp van 'n sisteem denkebenadering gesintetiseer. Die studie ondersoek eietydse generiese strategiese beplanningsraamwerke soos Porter se vyf-kragte-model, maar het bevind dat hulle beperkte toepassing in die bewaringstoerismebedryf het. Die kritieke veranderlikes wat bewaringsgebiedbestuurders in hulle strategiese beplanning moet insluit, word in vyf belangrike kategorieë, naamlik omgewings-, samelewings-, ekonomiese-, nywerheids- en sakefaktore, ingedeel. Die navorsing stel ’n strategiese beplanningsraamwerk voor wat ’n strategiese beplannings- en iteratiewe fase insluit en van die onderlinge verband tussen die belangrike veranderlikes in ag neem.

Sleutelwoorde: strategie, beplanning, bewaring, toerisme, Suid-Afrika, bestuur, omgewing, industrie, samelewing, besigheid.

ISISHWANKATHELO

Umhlaba ophantsi kwenkqubo yolondolozo-ndalo ufuneka kakhulu ekwandiseni ubukho beendidi-ndidi zendalo. UMzantsi Afrika awukafikeleli kwiThagethi LaseAichi Le-11 leendidi-ndidi zendalo, lokusikwa kweendawo ezifika kwi-17% yomhlaba ongengomanzi zibe ziindawo ezikhuselweyo engadlulanga u-2020. Nakuba kunjalo, uMzantsi Afrika uye wangumzekelo, kumazwe-onke, wendlela esingavalwa ngayo esi sikhewu lulondolozo lwabucala. Kuyafuneka kakhulu ukuba ziqiniswe iindlela zamashishini olondolozo-ndalo zokucwangcisa ngobulumko esenzela ukuba imali kwaneendawo-zendalo zihlale ixesha elide. Oku kuqiniswa makwenziwe ngokuthathela ingqalelo iimeko-meko ezingelula zemo-yendalo, nezentlalo-bantu, nezalo msebenzi wolondolozo, ukuze iindawo zolondolozo-ndalo zigcineke zisebenza nakumaxesha okushokoxeka kwemali. Olu phando lwenziwe ngokohlobo-phando oluyi-*inductive qualitative research* kunye nomxube weemethodi, zaza iziphumo zaxelwa ngokwendlela eyi*systems thinking approach*. Olu phando luphicothe izikhokelo zocwangciso olunobulumko eziludidi-lunye zexesha elinye, ezinjenge *Porter's five forces*. Kodwa lufumanise ukuba ziyasilela kulo msebenzi wolondolozo nokhenketho. Iimeko-meko ezingundoqo ekufanele ukuba zisetyenziswe ngoomanejala beendawo zolondolozo-ndalo kwizicwangciso ezinobulumko zabo zihlelwe zaba kwizintlu ezibalulekileyo ezintlanu, ezizezi: ezeendawo-zendalo, ezentlalo-bantu, ezoqoqosho, ezalo msebenzi, nezamashishini. Olu phando ke luphakamisa isikhokelo socwangciso olunobulumko esiquka ucwangciso ngobulumko olunesigaba sophinda-phindo, nesikuthathela ingqalelo ukuphinyelana kodlelwano lwezi meko-meko zibalulekileyo.

Amagama aphambili: isicwangciso esinobulumko, ukucwangcisa, ulondolozo-ndalo, ukhenketho, Umzantsi Afrika, oomanejala, indawo-yendalo, umsebenzi-mveliso, uluntu, amashishini.

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ACRONYMS

[Place]	Placeholder for conservation area to protect anonymity
B-BBEE	Broad-Based Black Economic Empowerment
BIESE	Business, Industry, Economy, Society, Environment
CBD	Convention of Biological Diversity
CITES	The Convention on International Trade in Endangered Species
COP	Conference of the Parties
CLD	Causal Loop Diagram
CMP	Conservation Measures Partnership
DEA	Department of Environmental Affairs
GDP	Gross Domestic Product
IUCN	International Union for Conservation of Nature and Natural Resources
LAC	Limits of Acceptable Change
LPI	Living Planet Index
NAICS	United States North American Industry Classification System
NEMBA	National Environmental Management: Biodiversity Act
NGO	Non-Governmental Organisations
OECD	Organisation for Economic Co-operation and Development
PAX Stays	One person one tour one day
PESTLE/PESTEL	Political, Economic, Social, Technical, Legal, Environmental
PHASA	Professional Hunters Association of South Africa
PPP	Public-Private Partnerships
PSR	Pressure-State-Response
Qual	Qualitative Research
Quan	Quantitative Research
ROE	Return on Equity

ROI	Return on Investment
SANParks	South African National Parks
SAPAD	South African Protected Areas Database
SETA	Sector Education and Training Authority
SIC	Standard Industry Classification
SMART	Specific, Measurable, Achievable, Results-Oriented, Timebound
StatsSA	Statistics South Africa
SWOC	Strengths, Opportunities, Weaknesses, Challenges
SWOT	Strengths, Opportunities, Weaknesses, Threats
TIES	The International Ecotourism Society
UN	United Nations
UNEP	United Nations Environmental Program
UNEP-WCMC	United Nations Environmental Program - World Conservation Monitoring Centre
UNESCO	United Nations Educational Scientific and Cultural Organisation
UNWTO	United Nations World Tourism Organisation
UNISA	University of South Africa
WEF	World Economic Forum
WRSA	Wildlife Ranching South Africa
WTTC	World Travel and Tourism Council
WWF	World Wildlife Fund

CONFLICTING TERMS

Due to the span of the research representing two different academic disciplines a list of possible confusing terms which may have a different application in each of the academic settings has been provided to aid the reader to understand their role in the text.

Environment *(noun)*

Is defined in the online Cambridge Dictionary as follows:

The environment (nature): "the air, water, and land in or on which people, animals, and plants live": e.g. We're trying to protect the environment from pollution (see Section 2.2).

Environment (surroundings): "the conditions that you live or work in and the way that they influence how you feel or how effectively you can work": e.g. a good business environment (Cambridge Dictionary, *n.d.* a). This usage of the environment is commonly attached to other words describing specific aspects of the business in strategic management. The following are definitions of the most commonly used in combinations in strategic management:

- The **external environment** includes everything outside an organisation at the global, country and industry levels that might affect the ability of the organisation to attain its goals.
- The **macro-environment** includes political, legal, economic, socio-cultural, technological demographic and ecological forces (PESTLE) at the global level and/or within a country (see Section 2.6.3).
- The **industry environment** according to Porter (2008) comprises five main forces which include actual and potential competitors, suppliers, and buyers (customers or distributors), organisations that supply substitute products to those sold in the industry (see Section 2.6.4).
- The **internal environment** constitutes everything inside the organisation (Hill & McShane, cited in Louw and Venter 2013).

As this study addresses the macro environment, external environment and industry environment, as well as the environment in a natural sense, the word environment, occurs in the text in most of the above formats.

Sustainability (noun)

Sustainability: “the quality of being able to continue over a period of time”: e.g. the long-term sustainability of a company (Cambridge Dictionary, *n.d.* b). This version will most commonly be used in the text and will be combined with other words for example financial sustainability and environmental sustainability. *Financial sustainability* in this text refers to all business activities a conservation area conducts to sustain itself financially.

Sustainability (environment): “the quality of causing little or no damage to the environment and therefore able to continue for a long time”: e.g. the company's commitment to environmental sustainability (Cambridge Dictionary, *n.d.* b). Environmental sustainability will be specified as environmental sustainability.

Systems *(noun)*

System (set) “a set of connected items or devices that operate together” (Cambridge Dictionary, *n.d.* d): e.g. the natural systems of planet earth. This will be the most common use in the text, however, not referring to systems in the technological sense. Systems in this text will refer specifically to systems as referred to in systems theory which can be defined as: "A system is a set of things—people, cells, molecules, or whatever—interconnected in such a way that they produce their pattern of behaviour over time" (Meadows, 2009:1) (see Section 2.4.4).

System (method) “a way of doing things; a method: e.g. My assistant will explain the system for filing a medical claim” (Cambridge Dictionary, *n.d. d*).

CHAPTER 1: INTRODUCTION

"A new type of thinking is essential if mankind is to survive and move toward higher levels" – Albert Einstein (1946:11)

1.1 Introduction

Biodiversity change is occurring at a magnitude so large it is now considered an essential global change in its own right (Sala, 2000). The Living Planet Index (LPI), which measures trends in thousands of vertebrate species populations, shows a decline of 60% (range: 50% to 67%) between 1970 and 2014. In other words, the number of mammals, birds, reptiles, amphibians and fish across the globe is, on average, less than half the size it was in 1970. (WWF, 2018). Internationally the number of species threatened far outstrips the available conservation resources we have to reverse the situation and the situation looks to be worsening (Myers *et al.*, 2000). Internationally human land use has started putting pressure on global ecosystems. Land use has caused declines in biodiversity putting pressure on the capacity of the biosphere to sustain life (Foley *et al.*, 2005). It has become imperative for the conservation tourism industry to help find sustainable solutions for the problem.

The IUCN (International Union for Conservation of Nature and Natural Resources) classifies protected areas according to seven different categories (IUCN, 2008): (Ia) Strict Nature Reserve, (Ib) Wilderness Area, (II) National Park, (III) Natural Monument, (IV) Habitat/ Species Management, (V) Protected Landscape/ Seascape, and (VI) Protected Area with Sustainable Use of Natural Resources. Different areas require different management techniques and will have different financing strategies. The size of the conservation tourism industry and its importance for job creation and conservation makes it imperative for us to find solutions to optimise funding.

The financing of conservation areas relies on two different funding streams. Start-up capital to finance and fund the purchase of land and initial set up cost and secondly funding to cover the day-to-day running of the concern. Research shows the initial setup cost can be quite high and will yield a low return over the long term (ABSA Group - Economic Research Department, 2003). Initial set up cost with multiple sources that can include donor funding; government; domestic and international funding. Secondly funding to cover the day to day running of the concern. Income streams may include tourism - consumptive and non-consumptive; international and local donors; government – national, provincial and municipal. By optimising the strategic management process, role players can improve the efficiency and effectiveness of the conservation business. The process allows us to look for revenue-generating opportunities and ways to improve conservation and business activities.

To improve the effectiveness and efficiency of conservation areas, conservation area managers can look to the body of business research. Although there are different opinions on the role of strategy and strategic management, the strategy subject field has been discussed by managers since the early twentieth century and well researched in the economic sciences from as early as the 1950s (Louw and Venter, 2013). The concept of strategic management is that the strategy of the business unit will give direction to various functional areas. The strategic direction will determine if the conservation area focuses on tourism, consumptive tourism, breeding, donor funding or government support and the contribution percentage of each for funding. Each functional area including conservation; operations; marketing; finance and human resources need to work toward a single goal to achieve the business strategy (Witcher and Chau, 2014). The strategy ensures all the functions in the conservation area work toward achieving the business/conservation goal for that conservation area.

Strategy as a specific area of focus has received very little attention in conservation studies. Overlooking the strategic perspective is a serious concern, as a purely functional approach to management and financing conservation will result in a lack of coordination between functions. The result will also be an unclear vision of the management of the strategic focus being for example on either differentiation or cost advantage. In South Africa, the lack of knowledge in the business strategy field and tools for park managers in the growing nature of the conservation industry has made this research essential and highlighted the need to develop a strategic framework to assist managers of conservation areas in their strategic planning.

This research will draw on scientific studies from business as well as conservation fields. The interdisciplinary study will draw on the opinions of the general public through an environmental perceptions survey and park managers and other stakeholders in the conservation industry. The opinions of the public will inform aspects such as the general perception of the amount of land under conservation and the quality of the management of such areas. The expert opinions of the conservation area managers, as well as stakeholders, will provide an internal perspective of the actual management and strategic planning practices. A qualitatively driven concurrent mixed method research design will be followed in the study.

The mixed method design will include a validated environmental perceptions quantitative survey that has been running since 2000 in New Zealand (Hughey *et al.*, 2004; Hughey, Kerr and Cullen, 2016). The survey that was used with permission and adapted to local conditions was conducted via an online survey with recruiting through social media, email and face-to-face. The qualitative part of the study makes use of face-to-face semi-structured in-depth interviews. The interviews lasted one hour or more and explored planning practices, strategic management, industry pressures, macro-environment, conservation management and general management practices

of the conservation areas. Each of the interviews is analysed to develop insights and then synthesised through a systems perspective to develop a strategic framework for conservation areas.

The study highlights key variables that affect the conservation tourism business, that the conservation tourism manager has to take into account when conducting the strategic planning process for the organisation. The framework during the process highlights these variables in five broad categories, including environmental, societal, economic, industry and business variables. The framework highlights the non-linearity and interconnectedness of all these variables. The industry variables due to their importance (McGahan and Porter, 1997) received disproportional attention, uncovering severe shortcomings in the Porter's five forces model (Porter, 1979) to analyse the conservation tourism industry adopting a systems perspetive.

Utilising the critical variables the study presents the interconnectedness of the conservation tourism business's commercial process and strategic management with the rest of its external environment. The analysis shows stakeholders and ultimately, society's connection with the environment as well as the importance of commercial models to support the expansion and management of conservation areas. Finally, the research proposes an iterative strategic planning framework that includes a strategic planning and an iterative management phase in a reinforcing growth cycle, driving the conservation tourism business to achieve its vision.

Some of the indicators discussed in the introduction provide a picture of a planet in dire need for strategic intervention. To understand the motivation for developing a strategic framework for managing conservation areas, we need to have a deeper understanding of the reason for the study.

1.2 Motivation

The Aichi Biodiversity target 11 developed as part of the strategic plan for diversity 2010- 2020 has the following target "By 2020, at least 17 per cent of terrestrial and inland water areas and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well-connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscape and seascape" (CBD, 2011: para 11). South Africa is behind on the Aichi 11 target with its official protected area land cover listed as 6.5% as of 2011 (CBD, 2018). According to the fifth national report to the convention of biological diversity from South Africa, the country has achieved 7.8% at the end of 2013. The report states that this includes some unverified private reserves (Department of Environmental

Affairs, 2014). Even though this is an improvement and still excludes many of the private reserves in South Africa, this official number is well below the latest 14.9% global average percentage (UNEP-WCMC and IUCN, 2018). Besides the motivation to find solutions to make conservation areas more viable to enable growth the Aichi targets specify “effective and equitable management” (CBD, 2011: para 11).

Continued focus on the effectiveness and efficiency of the conservation area are required to keep the well-established public conservation areas as well as the emerging and well established private conservation areas optimised and funded. Funding pressures provide a significant challenge for South Africa according to the CBD (2018) "The South African government is the primary source of funding for biodiversity management and, while donor funds are an important source of funding, amounts available from donors tend to decrease.” Through strategic incorporation and improved strategic management of private conservation areas, the South African conservation funding model for the future can look very different. After the proclamation of the Game Theft Act (105) of 1991 game became an asset and businesses could be established to conserve and utilise wildlife for private gain (Oberem and Oberem, 2016). The development of the private conservation industry has developed through emergence with limited planning and forethought, driven by market forces.

After the significant wildlife destruction with the arrival of European populations in South Africa the country reached a low of an estimated 557,000 animals in 1964. From this low came a significant success story over the next 60 years (Flack, 2011) reaching game numbers of an estimated 20 million (Oberem, 2016b). This major success story has been attributed to the growth of the private game ranching industry in the country. The game ranch industry, directly and indirectly, creates employment for more than 100,000 people (Dry, 2010; Saayman, Van der Merwe and Rossouw, 2011; Department of Environmental Affairs, 2018), the game ranching industry adds 4.3 Billion South African Rand (Refered by the currency symbol R) in wildlife sales (Taylor, Lindsey and Davies-mostert, 2016), R8.6 billion in consumptive hunting, and R4.5 billion in wildlife products to the South African Economy (Department of Environmental Affairs, 2018). Besides the economic benefit, this industry has more than doubled the land under conservation in South Africa since inception. Government conservation areas account for 6.4% of South Africa’s land area while wildlife ranches account for 14% (Taylor, Lindsey and Davies-mostert, 2016). According to Dry (2010), private conservation areas account for 16.8% of the country’s surface area.

Some private reserves have performed well compared to government conservation areas. Some even outperformed government reserves on some conservation indicators. There seems to be strong evidence that at least some of the 9600+ private reserves are meeting their conservation

objectives (Gallo *et al.*, 2009). The line between public and private conservation has also been blurred with the apparent strategy of providing concessions to private entities in National Parks (SANParks, 2016). The management of these conservation areas has thus increased in complexity and area where strategic management practices should assist. Many of these private reserves are partly or wholly funded by consumptive tourism. Markets exist internationally and in Southern Africa for game meat and consumptive tourism. Significant increases in the size of game auctions and also the price of various animals have made selling game an option to farm owners to fund operations (Thomas, 2013). Consumptive tourism is one of many available options to fund conservation.

According to Cousins, Sadler and Evans (2008: 1) research conducted "wildlife ranches contribute to conservation positively by maintaining natural areas of habitat and providing resources to support reintroduction programs of threatened species". However, Cousins *et al*. (2008) reported several "limitations centred on three themes that generally arise due to the commercial nature of wildlife ranching: (1) tourist preferences drive the industry, (2) predators are persecuted by farmers to protect the valuable game, and (3) inadequate resources are made available for professional conservation management and planning on ranches". These limitations indicate a need for research that addresses these themes, firstly the need to cater for and plan for tourist preferences is a strategic exercise as part of the business environmental impact assessment. Secondly, the theme of 'limited resources made available for planning and management' shows a clear need for the development of a strategic management framework for private reserves. The study investigates issue one and three, point two, although critical is not addressed fall outside the study scope mainly due to research design limitations.

While the increase in private game ranches increased the total land area for conservation, it has also increased competition and provided partnerships through concessions for the National Parks and other public conservation areas. With a wide array of tourism options competing for the tourists spending, it has become imperative for government-owned conservation areas to provide a competitive and differentiated service. National and regional parks have also been subjected to government budget cuts and are increasingly tasked to rely on tourism funding to cover their operational costs. In a changing environment, it has become imperative to develop a positioning strategy to ensure the health of these National assets. In the National Parks responsible tourism strategy 2012-2022 (SANParks, 2012:31) eight strategic tasks were highlighted focused explicitly on tourism development.:

1. Restructure the division;
2. Implement responsible tourism minimum standards;
3. Reduce the cost of tourism operations;

4. Grow tourism revenue;
5. Infrastructure development and maintenance;
6. Sales and marketing;
7. Tourism research; and
8. Improve visitor service and experience.

These tasks make it clear that growing tourism revenue and optimising the division's structure for improved visitor experiences are key priorities. Achieving these strategic tasks while ensuring the ultimate conservation goal stays intact and ultimately grow the areas protected for future generations, research is imperative to assist the conservation tourism industry in optimising and delivering on it. There seems to be a clear divide between the sciences that developed in the business sphere on how to ensure sustainable competitive advantage. Compared to a multitude of studies focused on conservation and wildlife area management and research conducted on various aspects of funding models for conservation areas, little focus has been placed on finding a framework to help the manager running a conservation area to position his operation in a very crowded industry to ensure a sustainable competitive advantage over time.

In a complex world looking at a complex issue that encompasses many different elements, it is essential to look at the problem from a holistic point of view. Just looking at the issue from a purely deductive perspective would not allow us to look at the interplay between elements. By using synthesis, an analysis of the different issues that face the conservation tourism market as well as conservation and sustainability together we can build a more robust model to understand the interactions. Systems science provide such a platform. Enables us to look at the interplay between elements and come up with novel solutions that will include all elements and stakeholders. By utilising this approach in an interdisciplinary study, a holistic framework is developed that provides a strategic business focus to conserve and be financially sustainable.

Business strategy research has been developed over time to bring together seemingly incompatible activities and or resources. The development of frameworks has been used to develop positioning maps for business. This research will develop a competitive strategic framework to enable conservation areas to position themselves in a very crowded industry. The ultimate aim is to grow tourism business success which in turn increase conservation, as a driver of employment and conserving biodiversity one of South Africa's greatest assets. Due to the complex nature of the subject and the proliferation of linkages in the conservation tourism market, it is essential to not just look at the subject of strategy which is an overarching subject matter in the reductionist paradigm. It is essential to have a holistic approach to the design of a model or framework for management.

The development of business models and business strategies for private game ranches to enable their sustainability as well as the effective strategic management of public conservation areas is imperative. This study will develop a framework to assist with strategic management of such conservation areas. Further to this some key questions will also surface including but not limited to: How do we ensure the competitiveness of government-run conservation areas in an attractive and competitive private conservation environment? How do we develop financial viability for game ranching and public reserves, specifically eco-tourism focused reserves? How do we address many of the seemingly incompatible financing options for private conservation areas together? How do we grow the industry with the ultimate goal of conservation? What conservation activities need to be funded? What is the environmental impact of the various funding mechanisms? What are the various ethical considerations that need to be addressed?

The motivation highlights the importance of optimising the strategic management of conservation areas to ensure their long term sustainability. The problem statement will highlight the knowledge gap identified in current literature and conservation management practices.

1.3 Problem statement

A gap has been identified in the knowledge concerning the strategic management of conservation areas. Conservation areas are managed in a complex multi-stakeholder environment and have a diverse range of objectives including conservation, profit or recreation. Conservation areas often operate at a loss and are heavily dependent on either donor funding or subsidies from the government to remain financially afloat. It is, therefore, necessary to investigate the business models used by conservation areas and the perceptions of the general public to develop an understanding of how conservation area operations differ from other businesses.

The research of the two essential aspects of running a conservation area namely conservation management and tourism/hospitality or business management fall within two different academic disciplines with little integration which has resulted in knowledge gaps. Most research on the management and development of tourism in conservation areas has been either focussed on the financial question of how to fund conservation or the natural conservation of the area within these two disciplines. The majority of the body of knowledge has evolved to be very tactical by nature with a limited strategic scope resulting in a clear need for the development of a strategic framework for conservation areas.

The lack of integration between business and environmental academic disciplines has resulted in limited strategic management literature and practice guidelines for conservation area management. This lack of integration is further concerning as the business strategy literature is

very narrowly defined to ensure financial sustainable competitive advantage with limited focus on integrating environmental conservation into the management frameworks. The purpose of the study highlights the main focus of the research.

1.4 Purpose of the study

To examine contemporary environmental and business management thinking in order to understand the complex environmental, societal and conservation tourism industry variables and their role in securing land for conservation, incorporating the learnings in the development of a strategic management framework for the sustainable management of conservation areas.

A quantitative environmental perceptions survey and qualitative management interviews are utilised to accomplish this purpose. The following primary and secondary research questions will inform the study.

1.5 Primary research questions

The following primary research question reflects the complexity of the topic and the urgency to understand the variables involved in the management of conservation areas and the need to develop a framework for conservation managers to deal with such complexity.

How do conservation businesses strategically plan for long term financial and environmental sustainability taking into account complex environmental, societal, and industry variables, ultimately securing the land for conservation?

Sub questions:

1. What environmental, societal, industry and business variables has a substantial impact on conservation area success?

2. Does the contemporary strategic planning frameworks utilised in management and environmental sciences address the strategic planning needs of conservation area managers?

3. What are the strategic business models and frameworks conservation area managers currently utilising in their planning?

4. What variables do conservation area managers need to consider in their plan to remain sustainable in a competitive environment while preserving environmental integrity?

5. What constitutes a strategic management framework for conservation areas to optimise their long term financial and environmental sustainability?

In order to answer these primary questions, a study aim and several objectives will inform the main outcomes required by the research process.

1.6 Aim and objectives

The study aims to develop a framework for the strategic management of conservation areas at the business level to ensure sustainable funding of conservation areas through the improvement of management practices.

Objectives

1. To examine the current state of the South African macro environment, the conservation tourism industry and societal pressures and its role in successful conservation area management.

2. To investigate contemporary strategic management planning models and frameworks in the management and environmental sciences.

3. To gain an understanding of the South African public's perception of the pressure on, state of the environment and their response to South African environmental challenges to gauge societal variables and its implication for the strategic management of conservation areas.

4. To determine the role of public perceptions in determining conservation area management, and more specifically, conservation success.

5. To analyse current conservation area management and conservation practices, and investigate their current business planning models/frameworks and determining its role in long term sustainable conservation management.

6. To synthesise the research results to develop a strategic management planning framework for the long term financial and environmental sustainability of conservation areas.

The objectives of the study inform the research design to enable the development of a strategic management framework for conservation areas.

1.7 Research design

The study constitutes a descriptive exploratory research study. A qualitatively driven concurrent mixed method research design has been followed to integrate general public opinions gathered

through a validated quantitative survey with qualitative semi-structured conservation management interviews. A purposive sampling technique was utilised to identify respondents of the quantitative survey and participants for the qualitative study. Data collection methods included an online survey as well as semi-structured face-to-face interviews. The quantitative data were analysed using Tableau 10 as well as R version 3.6 statistical software. The qualitative data were analysed utilising Atlas.ti version 8.

Certain key theoretical frameworks are utilised and discussed in the research. The following section provides a short description of these frameworks.

1.7.1 Theoretical framework

The theoretical underpinning of the environmental perceptions research conducted is the Organisation for Economic Co-operation and Development (OECD) Pressure-State-Response model. The Pressure-State-Response (PSR) model aims to evaluate human pressure on the environment and propose action necessary to get nature back to its desired state (Levrel *et al.*, 2009). The validated research tool utilised was developed in New Zealand and has been the longest-running environmental perceptions study in the world (Hughey *et al.*, 2004; Hughey, Kerr and Cullen, 2016). Further to providing a validated research instrument, the New Zealand study also provides a baseline of validated results to compare against the South African data to support the analysis.

The main strategy framework investigated in the qualitative semi-structured face-to-face study is Porter's five forces model as the study included an industry level look at conservation area management. Porter's five forces model depicts the five major forces that affect the business at the industry level (Porter, 1979). Other business models utilised during the study include the PESTLE mnemonic which provides an outline of the leading environmental variables affecting a business which includes Political, Economic, Social, Technical, Legal and Environmental (Witcher and Chau, 2014). Stakeholder theory was utilised for understanding the key players and their effect on the conservation businesses in a multi-stakeholder environment. Stakeholders can include but are not limited to employees, unions, suppliers, customers, shareholders and the community (Freeman, 2010).

Due to the complexity of the multi-faceted study area, a systems diagnosis approach was used to identify interactions. The complexity can first be identified in the global environmental challenge which this study incorporates. The environmental question has been described as a wicked problem (Rittel and Webber, 1973) and a mess (Ackoff, 1979). Business strategy and its complexity can also be seen in the divergent viewpoints and tools that have been developed to

try and understand the concept (Mintzberg, 1987). Systems science provides a way to look at complex issues and synthesise the interactions of variables (Meadows, 2009; Maani, 2016).

The main theoretical frameworks will be expanded on and discussed in chapter two. The study limitations must be identified, especially taking into account the complexity of the subject.

1.8 Assumptions, limitations and scope

It is important to clarify the assumptions that underlie the study. Due to the complex nature of the study and a large number of factors that can impact conservation management multiple assumptions will be embedded in the research. The following section clarifies some of these.

1.8.1 Assumptions

The study will investigate the strategic management of conservation areas, combining public conservation areas and private conservation areas at various organisational levels. Public and private conservation tourism businesses have a diverse range of primary objectives, including profit and conservation. The study assumes that different conservation tourism activities and formats can be studied together and that it is possible to compare them. The study compares game farms in their different formats, national parks, provincial parks and municipal parks to understand their differences and similarities, introducing complexity in the study. Government or public, protected areas that don't have a profit motive may have a goal to reduce reliance on government funding due to budgetary constraints.

This public objective to optimise the running of a public conservation area against an allocated budget may be seen as an optimisation motive. An assumption is made that this optimisation motive can be compared to the profit motive of private conservation areas. Further that a conservation motive can be introduced side by side with a business motive for sustainable competitive advantage and measured. The study will investigate various motives of conservation areas spanning from profit to pure conservation motive with very limited income streams. The *raison d'être* of the conservation organisation becomes the determinant of the strategy to be followed.

Tourism and conservation are concepts made up of various diverse sectors and industries. The study investigates how a conservation area manager can select from the various services and products or industries and assumes that it can be bundled to provide a conservation focussed firm financial sustainability in the conservation tourism industry. The conservation tourism industry has been classed as wildlife tourism, conservation tourism, nature-based tourism and eco-tourism (Higginbottom, 2004; Van der Merwe and Saayman, 2005; Cousins, 2007; OECD, 2009; Buckley,

2010; Slabbert and Du Plessis, 2013; Els and van der Merwe, 2016). Further to the above the consumptive tourism and other game ranching activities including game meat production and breeding can be added as further value-adding services or products (York, 2016). This study incorporates these different business or funding models in one study to bring an over-encompassing view of the strategic options available to the conservation area manager.

That public perceptions can be measured and utilised to gain an understanding of the general public's mindset when it comes to environmental issues and conservation more specifically. The assumption is that by understanding the perceptions of the general public a more accurate understanding will be provided on how to optimise the strategy of the conservation area firstly to address conservation issues highlighted in the perceptual study and secondly how the publics opinions affect the conservation tourism industry.

As can be seen in this discussion, the research will cover multiple industries and will incorporate two different academic disciplines. Limitations must be clarified to highlight the limitations of our human understanding and the limits of what this study will cover.

1.8.2 Limitations

To begin to understand the limitations of the study, we must first start with our human limitations. Only by knowing our limitations can we limit the adverse effect our and our respondents' biases and heuristics have on our inference.

1.8.2.1 Induction

"Treating strategy like a problem of deduction assumes that anything worth knowing is already known" (Rumelt, 2011:244). Due to the broad scope of the study and the analysis and synthesis of various concepts by the researcher to incorporate the views of the interviewees and the respondents to the survey the limited applicability of inductive reasoning should be noted. The study includes inferences by the stakeholders, the interviewee's as well as the researcher. Hume in his Treatise of Human Nature (1888) is the first to highlight the problem with induction, that as humans we make causal inferences based on our experiences and observations and cannot accurately do so (cited in Stanford, 2018). As humans, our reasoning is also skewed by biases and heuristics, the researcher and respondents are not immune to this (Kahneman *et al.*, 1974).

The framework developed from the research does not aim to draw causal inferences that are measurable but will aim to depict causal links impacting conservation tourism to generate a strategic planning framework. "To generate a strategy, one must put aside the comfort and security of pure deduction and launch into the murkier waters of induction, analogy, judgment,

and insight" (Rumelt, 2011:245). Further to the problem with induction, the limitations of the methodology need to be clarified.

1.8.2.2 Methodology limitations

Limitations in the descriptive exploratory research study utilised in this project exist in its ability to determine causality. The mixed method research methodology utilised for this study is thus mainly for descriptive purposes. The CLD (Causal Loop Diagram) is a systems science tool to show relationships between elements of a system. The objective of drawing such causal linkages is to understand how elements are linked conceptually, causal inference determined through systems analysis in this study should be tested through experimental design. The next section will provide a look at the sampling limitations and how it limits the study application.

1.8.2.3 Sampling limitations

Sampling is based on a non-probability purposive sampling method. Partly due to limited budget and resources that are available for a study of this kind the sampling method for the study of the environmental perceptions was a purposive sample. A database of respondents was utilised to reach the general population for an online survey, and this was followed on by a social media campaign. Initial results indicated a racial skew. To address this, the online survey was presented on tablet devices to increase the representativeness of the survey.

The conservation area managers sampled for face-to-face semi-structured interviews were chosen to get a diverse group of respondents representing a mix of private and public, municipal, provincial, large, small conservation areas in various regions. This sampling was also thus conducted in a non-probability purposive sampling method.

The sampling limitations indicate what extent the results can be generalised to the broader population. The scope of the study is also essential to understand what the theoretical, geographic and other limitations of the study are.

1.8.3 Scope

The role of strategic planning in management is to provide a very broad outlook in the field of managing conservation areas. It is, however, essential to create an understanding where the boundaries of this study are.

1.8.3.1 The forest or the trees

If the analogy of the forest and the trees are applied to this study, this study is about the forest. Strategy as a field of study focusses on the big picture. Limited operational focus is placed on the day to day running of the conservation area. Some specific publications have been aimed at the operational running of game farms in South Africa as well as, including but not limited to, some specific work by IUCN (2000) on the financing of conservation areas, *Wildplaas Bestuur* (Game Ranch Management) edited by Bothma (2012) and The New Game Rancher edited by Oberem and Oberem (2016) has been published.

The operational focus and limited strategic approaches of these and other publications, mainly due to their operational focus sparked the interest in the topic. The Public conservation areas have specific management frameworks to develop individual park management plans, and these follow specific guidelines such as but not limited to SANParks (South African National Parks) Coordinated policy framework (SANParks, 2008). SANParks has a tourism strategy, for example, the Responsible Tourism Strategy 2012 - 2022 (SANParks, 2012) and SANParks Strategic Plan 2016 -2020 (SANParks, 2016). Other similar plans are active in city and provincial conservation management agencies.

1.8.3.2 Prescriptive vs descriptive

Historically strategy has been split into two different areas prescriptive and descriptive approaches. Prescriptive schools focus on how things should be done and descriptive schools on explaining how they happen. Some schools do not believe that a rational planning approach is possible due to the unpredictability of events. The rational planning approach provides frameworks and methods of how the strategy should be done and provides some evidence that planning has a positive influence on company results (Mintzberg and Lampet, 1999). Due to its focus on a planning framework, the study will have a rational planning approach, but the limitations of the human ability to predict the future is a crucial consideration.

1.8.3.3 Strategic management

The study takes an outside-in approach to strategy. It will mainly focus on the external macro-environment as well as the industry perspective, including competitive strategy and the positioning of conservation areas in the conservation tourism industry. The strategy will be discussed at the business-level rather than corporate or functional level, looking specifically at strategic planning, rather than strategic foresight and strategic choice. This business-level focus is referred to in the study as ‘conservation area management’, in business terms, this area of study will be referred to as the ‘general management’ of conservation areas. Specific functional

management such as conservation management, tourism management and other functions are contributors to the overall success of the business and their role in its success will be as a part of the whole.

As tourism management forms an integral part of the funding model in many of the conservation areas studied if forms an integral part of the topic, but, it is important to stipulate that it is not the only funding option the conservation area manager has in his arsenal. The study does include other areas of strategy; interviewees highlighted these areas as necessary. The inclusion of the resource perspective has specific significance as it was the dominant management perspective of the interviewed participants. A focus was placed on products and service provided to finance conservation areas as well as current planning practices.

1.8.3.4 Environmental management

The study will touch on various aspects of conservation management. The environmental perceptions study provides a broad overview of the environmental perceptions of South Africans with the tool developed by Hughey, Kerr and Cullen (2016). The scope of the research goes slightly broader than conservation management and includes the general public's perceptions of other environmental topics which provides a base to compare where the conservation perceptions fall in the public perceptual framework compared to other environmental topics. Topics covered in the research include tourism environmental impact (limited scope), Tourists perceptions of the state of, pressure on and their response to environmental issues and conservation areas, current conservation pressures, practices, activities and planning of conservation areas.

This study provides a limited focus of tourism impact on the environment. Many studies have been conducted on tourism impact, the interviewees in this study highlighted the very minimal impact that tourists have on most of the respective areas under their management. The focus of this study will rather be expansive, proposing strategies to increase the conservation area under management, providing habitat and biodiversity.

1.8.3.5 Industry scope

The IUCN classifies protected areas in seven categories which will be discussed in the next chapter. This study will include five of the seven categories due to their availability in South, namely Ib Wilderness area; II National Park; IV Habitat and Species Management; V Protected Landscape or Seascape; VI Protected Area with Sustainable Use of Natural Resources (IUCN, 2008). The industry scope is broad and includes various industry sectors classed in South Africa as SIC (Standard Industry Classification) 11510 Game breading, 11520 Hunting and Trapping,

96333 Game parks and reserves, 96334 Activities of conservation bodies, 96335 Wildlife conservation and Tourism and travel services SIC 71222, 71223, 99049 (DTI, *n.d.*).

1.8.3.6 Study area

The study will be limited to South Africa. It is important to note that although the study is limited to South Africa, and all of the stakeholders were interviewed within South Africa. Some stakeholders and their organisations have interests in the rest of Africa and their learnings when specified have relevance to these areas. It is impossible to cover all terrestrial habitat types. All conservation areas will be classified according to biome. South Africa can be divided into nine biomes. The map in Figure 1.1 indicates the biomes represented in the area: desert, forest, fynbos, grassland, nama-karoo, savanna, succulent-karoo, thicket and the Indian Ocean coastal belt. The area of operation is critical to the success and the type of activity that can be conducted at the conservation area.

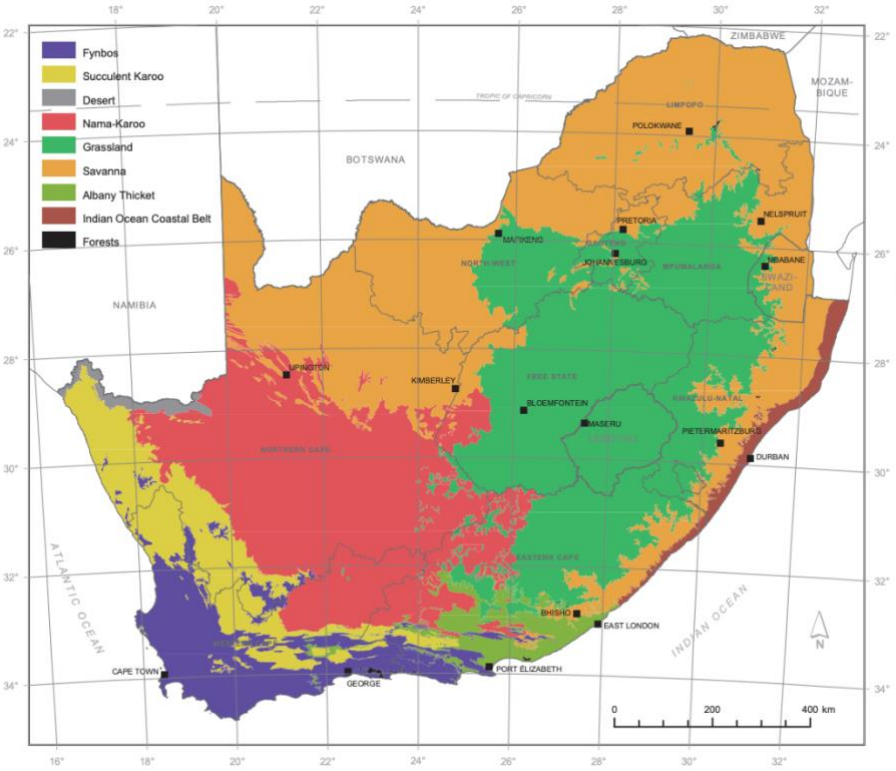

Figure 1.1: Biomes of South Africa, Lesotho and Swaziland

Source: Rutherford, Mucina and Powrie (2006:33) and SANBI (2006)

According to Du Toit and Van Rooyen (2012), the following variables have to be taken into account when setting up a game farm: the area, habitat type, water, size of the area, the game, sickness control area and geographic positioning. The study will aim to cover various protected areas that span a wide selection of biomes. The objective will be to develop a framework that will

bring biomes and other regional variables into the strategic planning process and not limit the result to only one specific area. A purposive sample will be drawn from various biomes, regions, geographic locations and protected areas.

The study is developing a planning approach for the strategic management of the conservation tourism business or public entity from a South African perspective. The conservation tourism business is a complex multi-stakeholder entity. Thus the optimisation of the strategic management process is of significant importance.

1.9 Significance

Due to the interconnectedness of critical global issues, this interdisciplinary study will have a significant impact on a diverse range of study areas. The significance of the study includes: impact related to conservation; humanitarian and societal significance; educational significance; impact on business science; environmental impact; tourism, conservation and wildlife industry significance and general human well-being. The UN (United Nations) highlights 17 global sustainable development goals or initiatives in Figure 1.2 that the UN has prioritised. The figure highlights the sustainability goals.

Figure 1.2: United Nations Sustainable Development Goals

Source: UNDP (2015)

The 2018 protected planet report shows the importance of conserving natural biodiversity and highlights how protected areas have an impact on every one of the 17 sustainable development goals (UNEP-WCMC and IUCN, 2018), which highlights the interconnectedness and complexity of the global challenges we face. The development of a strategic framework for the effective management of conservation areas will help ensure the sustainability of conservation areas and ultimately provide movement to these goals.

The study addresses systems of management and infrastructure development in the conservation tourism industry addressing goal nine. By employing local communities including the woman in the rural areas where meaningful work is scarce, effectively management conservation areas addresses goal one (no poverty), two (zero hunger), five (gender equality) and eight (decent work and economic growth). By increasing land and sea under conservation and preserving nature goal 13 (climate action), goal 14 (life below water) and goal 15 (life on land) are addressed. The proliferation of conservation areas also has a positive impact on education through environmental education and tours, as well as good health and well-being through the provision of places of relaxation goal three and four. Two of the conservation areas studied during this study also has a direct link to a water supply thus improved management of various conservation areas will affect Goal six. Municipal parks were included in the study applicability of the framework will affect Goal 11 (sustainable cities and communities). The study investigates responsible consumption and production at the conservation areas it will have limited relevance but will be discussed under goal 12. The management of conservation areas has direct relevance to environmental legislation and institutions improved management will help fight crimes such as poaching Goal 16 (peace, justice and strong institutions).

The significance of the study will be discussed in four broad categories, its impact on conservation, economic value of nature-based tourism, South Africa as well as the theoretical implications.

1.9.1 Sustainable conservation

The study addresses the strategic management of conservation areas intending to improve their financial and environmental sustainability with the ultimate aim to increase land under management. The importance of improved management practice in conservation can be noted in its inclusion in Aichi Target 11 "…are conserved through effectively and equitably managed, ecologically representative and well-connected systems of protected areas and other effective area-based conservation measures…"(CBD, 2011: para 11). The ultimate goal to preserve 17% of global landmass by this target may be indirectly addressed through the improved management

and the improved financial viability of conservation areas by developing a framework for the profitable/sustainable management of conservation areas.

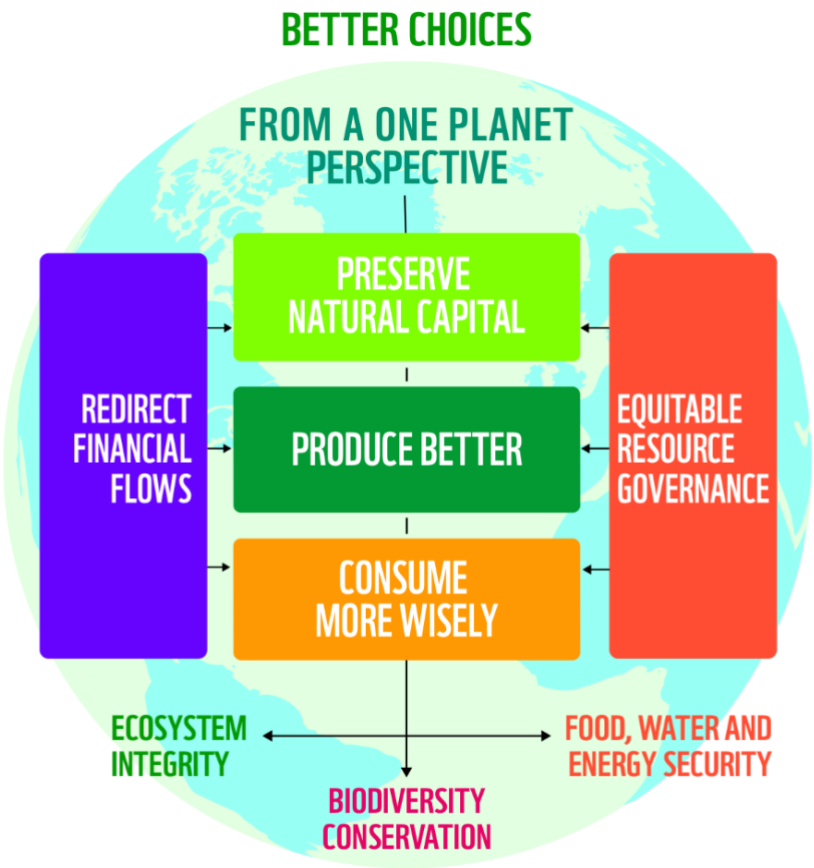

Figure 1.3: One Planet Perspective

Source: WWF (2014:11)

The framework will have international significance and will be valuable to park managers in the private or public arena to assist in the strategic management process. The improvement in the viability of conservation areas will enable the expansion of areas under management. For the private conservation areas, the framework will give a strategic template to improve profitability in the long term. WWF uses the one planet perspective in Figure 1.3 to highlight where the impact will be (WWF, 2014:11).

- **Redirect financial flows**. The framework will provide an outline for conservation areas to improve strategic planning, leading to greater business success. The improved business success of conservation areas will lead to increased financial flows to conservation business ventures depicted by preserve natural capital in the model. The internal perspective of the organisation will provide a list of value-added products and services that can assist in revenue generation for conservation tourism business.

- **Preserve natural capital**. Improving the financial sustainability of conservation areas provides an incentive to stay in or enter this competitive industry. In the long term, increased land commitment will ensure the preservation of natural capital.

- **Equitable resource governance**. The framework incorporates stakeholders needs and requirements including the local communities. Improved management will also have an impact on employment in communities that these conservation areas border. The environmental impact of the conservation tourism business ventures will be addressed in the framework.

The study not only has an environmental or social significance but also lends to optimising the commercial success of the conservation tourism area provides and economic benefit to South Africa.

1.9.2 South Africa

Although some of the businesses interviewed, manage conservation areas in various countries in Africa, the main geographical study area for the research focus on South Africa. The main significant impact is expected in South Africa as a country. South Africa only represents 2% of the global land area it is host to, 10% of the world's plant species and 7% of the world's reptile, bird and mammal species (CBD, 2018). South Africa's conservation initiatives are thus of critical global importance. Natural systems provide a large part of South Africa's essential services including clean water and air, agriculture, medicine, shelter and spiritual, cultural well-being. Estimates of the economic value generated by these services excluding marine services are R73 billion per annum (CBD, 2018). This study investigates the environmental perceptions of the South African public concerning many of these essential services.

The longest-running environmental perceptions survey is the "Public Perceptions of New Zealand" study. This research project has been running since 2000 and is currently on their eighth publication of the study (Hughey *et al.*, 2004; Hughey, Kerr and Cullen, 2016). It will be the first time public perceptions of South African's will be measured using this validated survey. The results of this survey give in indication what the pressures on the environment are as South Africans perceive them. It provides a measurement of the state of South Africa's environment as well as the management of the conservation areas in South Africa as perceived by the citizens, which is measured against the New Zealand study to provide an understanding of how we compare. Finally, the study provides an indication of what environmental activities South Africans engaged in and how much engagement they have with conservation tourism. The study also

includes stakeholder interviews to understand the pressures and opportunities that conservation areas face.

According to the World Travel and Tourism Council (WTTC), Travel and Tourism contributed R136 billion to South Africa's GDP (WTTC, 2018). The contribution to South Africa's GDP of the various industries that South African conservation areas and game ranches support is substantial. In Africa, the exports of cultural and nature-based tourism grew from 2% - 11% of total exports between 1980 and 2003 (OECD, 2009). Wildlife Ranching South Africa (WRSA) has set a goal for contributing 75 billion ZAR to the South African fiscus by 2021 (Oberem, 2016b). According to PHASA (Professional Hunters Association of South Africa) hunting alone contribute 8 billion ZAR to the South African GDP, live sales generate a further 1 billion ZAR, this number excludes fringe services (PHASA, 2016). SANParks alone achieved tourism income of R1.4 billion according to the 2017 annual report (SANParks, 2017). The substantial size of the industry also supports significant job creation.

According to WTTC, the tourism industry supports 726,500 direct jobs 4.5% of total South African employment. Indirect jobs sustained by the industry is 1.53 million jobs, 9.5% of total employment (WTTC, 2018). According to Dry (2010), the game ranch industry employs 100,000 people, WRSA has a goal to provide 300,000 decent jobs by 2021 (Oberem & Oberem, 2016). PHASA indicates that the hunting value chain sustains 140,000 jobs (PHASA, 2016). SANParks employs 4067 employees and supports further employment through its expanded job program (SANParks, 2017). The sustainable management of conservation areas thus support the South African development goals and job creation as prioritised in the State of the Nation Address by President Cyril Ramaphosa indicating job creation is one of the most critical objectives and that tourism is a high priority due to the number of people it employs (Ramaphosa, 2018). Not only does the number of jobs that conservation tourism support general South African employment but it also provides jobs where they are needed the most, mainly in the rural regions.

Further advantages of conservation area tourism and effective game ranch management include entrepreneurial opportunity development, infrastructure creation, value chain creation, environmental education, preservation of heritage, generation of foreign currency (Els and van der Merwe, 2016) as well as nutrition support and food security through provisioning of game meat (Oberem, 2016a). The importance of the effective, sustainable management of these conservation areas is thus of critical importance. Providing a framework for the strategic management of these areas to the conservation area manager will provide them with tools toward this goal. A strategic framework for conservation areas will also have theoretical significance.

1.9.3 Theory

The study provides an outside-in perspective on the organisation. Much of the current tools provided to conservation managers and game farmers are very tactical and operational, which in itself is not a bad thing as the nature of the conservation area, protected area or business is that of a very complex entity dealing with very complex natural balances. The exclusion of strategic thinking, however, is where the concern surfaces, the exclusion of taking cognisance of the competition, the link with the external environment as well as the coordination application of strategic management may harm the business or conservation area in the long term. This study thus evaluates the frameworks available to conservation managers to address this area.

The company or conservation areas environment plays a substantial part in its success and sustainability. Significant events can have a massive impact on the business and are the rule rather than the exception (Taleb, 2007). In a global environment with an accelerated change in technology, globalisation, telecommunications as well as social change and economic pressures it is imperative to understand how the environment impacts the conservation business as well as how the conservation tourism business can plan for this change. The study will look at the environmental variables that affect these businesses and incorporate them into a planning model. One of the main arguments in strategy is the extent to which a business can plan for the future. Two extremes exist in strategic thinking between rational and environmental, with the rational planning approach the business can plot its route, the environmental perspective the business have to accept fate. The other two extremes are controllable and unpredictable (Mintzberg and Lampet, 1999). The study will investigate the debate and its relevance in the industry.

As the study focusses on an Industry the logical choice of framework to start evaluating would be Porter's five forces model. The five forces evaluate the attractiveness of the industry using five forces: bargaining power of buyers, bargaining power of sellers, the threat of new entrants, the threat of substitution as well as the level of competition in the industry (Porter, 2008). Michael Porter describes the five forces model as an activity-based approach (Porter, 1996). The framework has been criticised that it excludes the resource perspective, cooperation as well as the government influence. A study was conducted in Greece in the tourism industry where two extra forces were described as government influence and technology (Andriotis and Ανδριώτης, 2004). This study tests the applicability of this framework in the conservation tourism market in South Africa and proposes a framework for strategic planning in the conservation tourist industry.

Porter's five forces framework includes the significant forces that affect the business but exclude some critical role players. The stakeholder theory incorporates these role players in the management of the business these include financiers, unions, employees and suppliers all form

part of the companies stakeholders (Freeman, 2010). The conservation tourism industry is a multi-stakeholder industry where various role-players need to be consulted to ensure sustainability for the organisation in public organisations this interaction is legislated. The community is a critical part of the organisation and provides its environment and is the supplier of employees. Government is significant as it affects legislation that drives tourism. The study will incorporate stakeholders in the strategic planning of the conservation area strategic management.

The external perspective of the organisation as discussed coupled with the internal pressures of the conservation area business is a complex entity. The businesses can be classed as a complex adaptive system (Meadows, 2009). Systems science and the CLD (Causal loop diagram) can be utilised in the planning for complex multi-stakeholder organisations. The study will utilise a systems approach to develop a strategic framework for the conservation tourist business testing an approach that was used in developing sustainable tourism for poverty relief in Siem Reap (Maani, 2016). This planning approach will provide significant guidance to future researchers studying complex multi-stakeholder organisations.

The study will ultimately include significance on multiple levels, the improvement of management effectiveness, conservation operations, economic value creation and theory development. The following section provides an outline of the research report structure.

1.10 Structure

The research report will be covered in seven chapters. Figure 1.4 provides a workflow diagram of the progression of the study and its delivery on the research objectives. The chapter outline will cover the Introduction; literature review; methodology; results of environmental perceptions survey (Quant); results of the stakeholder interviews (Qual); analysis; synthesis and framework development and finally the conclusion and recommendations.

Chapter 1: Introduction

This chapter covers the background or motivation for the study, including the current Southern African conservation tourism industry, challenges and opportunities. The chapter covers the problem statement and purpose of the study. It sets out the Primary research questions that will be answered through the rest of the thesis. In this chapter, the aim and objectives are set out that will aim to be delivered through the study. The research design gives a brief indication of the method used, which will be expanded on in Chapter 3. The theoretical framework will then be discussed that the research will be measured against which will be expanded on in Chapter 2. The assumptions, limitations and scope are covered to indicate the boundaries of the study. Finally, the significance of the study is covered in this chapter.

Chapter 2: Literature review

The literature review will cover five broad categories firstly the natural environment and the challenges faced in biodiversity, conservation and other issues. Secondly, conservation management and the conservation tourism industry in South Africa will we discussed. The proliferation of private conservation areas and their impact on the conservation industry. Proactive ecotourism with conservation as an end goal will be studied and also the effects of tourism on the environment. Tourism, as a vast field, will be defined. It will then be limited to specific areas of study, including sectors and sub-sectors that are related to conservation. The literature review will cover studies that shaped the strategy field. Porters 5 forces that shape the industry will be discussed as a key industry competitive framework. Some studies testing and adding to the theory will be discussed. A focus will also be given to the resources perspective as well as stakeholder theory and its relevance to this complex environment. The fourth area of focus will be complexity, wicked problems and messes in the study area and its impact on the development of a framework. Finally, the literature review will focus on the concept of framework development and research related to developing frameworks.

Chapter 3: Research design and methodology

The methodology chapter provides details on how the research was undertaken, through providing information on the data, research design, ethics and phases of the research. It will outline the sample selection method and considerations for the three data collection methods. As the study follows a mixed-method design, aspects of quantitative and qualitative research studies will be highlighted. Advantages and disadvantages of the various methods will be discussed.

Chapter 4: Results of environmental perceptions research (quantitative)

The analysis of the environmental perceptions research results will follow a state pressure response flow. First, the current state of the environment as perceived by the respondents will be discussed as well as the space allocated to conservation areas and how the respondents perceive the allocation of space. Secondly, the pressures on the environment from South African's perspective will be discussed. Thirdly the response aspect will cover how South Africans perceive the areas to be managed as well as their actions are undertaken to address environmental issues. Finally, the chapter will provide an outline of the demographic profile of the respondents.

Chapter 5: Results of Stakeholder Interviews (qualitative)

This chapter will give an outline of the qualitative data collected from the face-to-face semi-structured in-depth interviews. The results, as in other areas of this study, will follow an outside-in approach. Firstly, the study will look at the macro environment and the areas that impact the conservation areas that the interviewees highlighted. Secondly, we will look at the industry level

discussion and stakeholders in the industries. This section will include an evaluation of Porter's five forces and its applicability to the conservation tourism industry. Thirdly we will investigate the resources perspective of strategic management. Fourth, we will look at the internal or microenvironment of the business or conservation area. This section is limited in scope but will investigate income-generating activities conservation areas utilise as well as efficiency. Finally, we will look at the current planning practices and lack thereof that the conservation area managers perform.

Chapter 6: Strategic planning framework

The chapter uses an inductive approach to synthesise the literature review, research data and analysis conducted in chapter four and five to develop a strategic management framework for conservation areas. A systems approach is used to answer the primary and secondary research questions. Firstly, the chapter identifies the variables that conservation area managers need to incorporate in their strategic plans in a proposed BIESE (Business, Industry, Economic, Society, Environment) framework. Secondly, the chapter investigates some of the main strategy frameworks in the study for their usefulness in the conservation tourism industry. Thirdly, the interactions between the variables are investigated using a CLD. Fourth, a discussion about the current planning practices of conservation area managers. Finally, the chapter concludes with a proposed planning framework.

Chapter 7: Conclusion

The conclusion summarises the key findings from the research study. This final chapter proposes implications and recommendations from the study for practical as well as literature purposes. The conclusion provides strategic planning recommendations for conservation area management derived from the study. The limitations of the study and proposed future research conclude the research project.

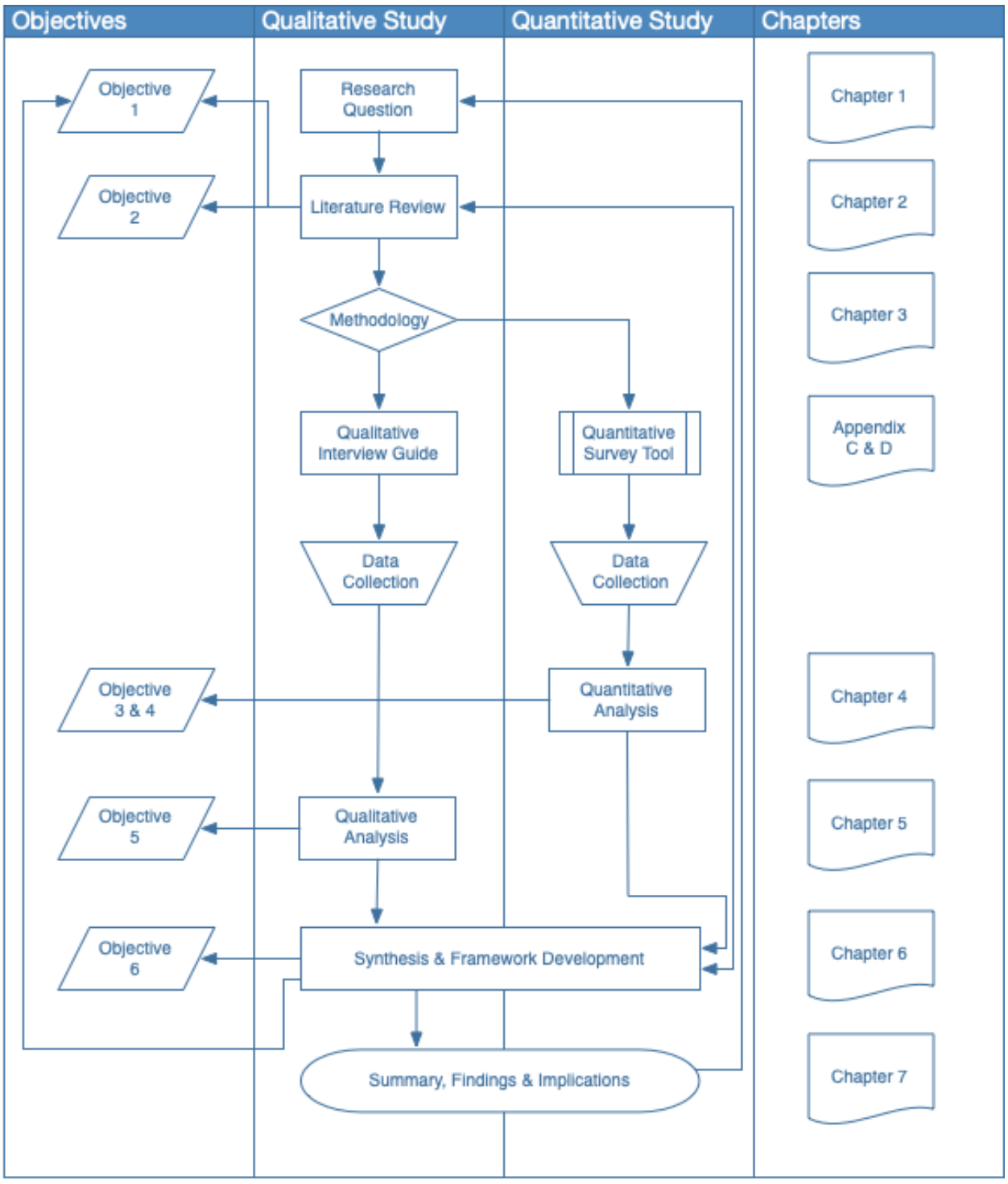

Figure 1.4: Research Project Workflow Diagram

Source: Researcher's compilation

The research project workflow provides an outline of the study. The left 'swim lane' in Figure 1.4 provides an outline of the objectives. As the research is qualitatively focused, the qualitative research lane is the provides the critical path. The literature review published in Chapter 2 provides initial answers to the research question from literature, starting to address objective one

and two. The methodology choice to address the research questions, published in Chapter 3, culminates on a mixed-method approach.

The qualitative and quantitative approaches kick off with the development and sourcing of accurate research tools published in Appendix B and C. The qualitative data collection included semistructured face-to-face interviews, whereas, the quantitative study included an online survey based on the New Zealnd study of environmental perceptions (Hughey, Kerr and Cullen, 2016). The quantitative analysis conducted in R and Tableau is published in Chapter 4. The qualitative analysis conducted using Atlas.ti follows in Chapter 5 - the data collection and analysis delivering on objectives three, four and five.

Finally, the synthesis brings all the facets of the study together, incorporating the literature review, qualitative and quantitative study to answer the research questions and creating a framework, delivering on objective six.

1.11 Summary

The study investigates strategic management of conservation areas, utilising a systems thinking approach to sustaining complex multi-stakeholder organisations. Attempting to answer the main research question “how do conservation businesses strategically plan for long term financial and environmental sustainability taking into account complex environmental, societal, and industry variables, ultimately securing the land for conservation?” The aim is to provide conservation area managers with the tools to strategically plan, creating long term sustainability of the areas they manage.

The study will use a qualitatively driven concurrent mixed-method research design to integrate general public opinions through a validated quantitative survey with qualitative semi-structured conservation management interviews. The results will be analysed using a systems thinking approach to synthesise the qualitative and quantitate results in a strategic framework. Caution should be taken as this inductive approach limits the researcher as well as the reader’s ability to make a causal inference from the results.

The study will be limited to strategic planning approaches at the business level, with a specific focus on external variables. Strategic foresight and strategic choice, however very important, falls outside the scope of the study. The study will focus on the conservation tourism industry in South Africa. The significance of the study for South Africa includes sustainable conservation through management improvement, economic value creation and the development of a theoretical framework.

The next chapter provides an overview of historical and contemporary literature in the environmental, management and related fields. The literature provides an outline of the state of, and pressure on the environment, showing the urgency of conservation management optimisation.

CHAPTER 2: LITERATURE REVIEW

"Only if we understand can we care. Only if we care will we help. Only if we help shall they be saved." ~ Jane Goodall (Reported by Denys and Holmes, 1998:106).

2.1 Introduction

Trying to integrate the complexity of the earth or natural environment and the complexities of the business world, not to mention their diverse range of theories, models and frameworks is a fundamentally impossible task. As humans everything we think we know about the world is a model, our models have congruence with the world, but they fall far short of reality (Meadows, 2009). As we traverse this maze of complexities, we are forced to deal with our own biases and heuristics. The human-made fences around conservation areas, subjects, theories, frameworks as well as industries are unnatural boundaries, ultimately all of these human-made enclosures fall within the one earth all earthly bound living organisms inhabit. The global environment is impacted by the significant global population increase and the demand for energy, food and land, resulting in pressures on the world ecosystem, requiring an increased focus on expanding land under conservation.

To be effective conservation areas need sound commercial practices for the procurement of funding. According to Ross Patterson (2009) trying to regulate the protected areas is worthless without funding. He indicates that funding is the greatest challenge that South African protected areas face. The South African Department of Environmental Affairs (2014) report limited financial resources and limited human capacity as crucial challenges to biodiversity. The ideal tool in the manager's toolbox to coordinate seemingly unrelated fields to develop plans to fund conservation and increase capacity is strategy. The ultimate aim of this research is to provide the tools to improve the strategic management of conservation areas leading to improvement in conservation initiatives and supporting biodiversity.

Conservation and game ranch management literature focuses on value-generating activities to enable the public or private conservation area to generate revenue (IUCN, 2000; Oberem and Oberem, 2016). Three main methods of revenue generation available to protected areas are first, government funding through tax budgets, secondly, international or local donor funding and thirdly, for protected areas to become more self-sufficient and even income-generating (Ross Paterson, 2009). Game ranches rely on the four pillars of game ranching: breeding rare and endangered game; hunting; ecotourism and wildlife tourism activities and processed game meat (York, 2016) to generate funding to enable their existence. Strategic decision making is critical to success in managing conservation areas. The literature, however, stops short of providing

strategic decision-making tools to assist conservation managers in making decisions to optimise this.

The conservation tourism area is not only responsible for preserving the land under management but also is dependent on the environment for its sustainability.

2.2 The natural environment

In 1960 the world was estimated to have reached 3 billion people (Botkin and Keller, 2012) in Oct 2011 this human population number reached 7 billion (United Nations, 2018). Rosling *et al.* indicate that UN experts expect the world population to peak at between 10 and 12 billion due to global birth rate declines (Rosling, Rosling and Rosling Rönnlund, 2018). The question of how many people the earth can sustain yields substantially different numbers based on the lifestyles the world population is willing to adopt (Botkin and Keller, 2012). The demand for energy, food, products and space to support such a growing population has placed unprecedented demands on the global environment. This growth has its limits, in 1972 MIT scientists published results from a “World 3” computer model simulation that indicated the limits to growth (Meadows *et al.*, 2004). The overstepping of these limits has revealed itself in human-caused impact on natural systems that have been so severe, and it has been proposed that we have moved into a new geological epoch the referred to as the Anthropocene (Crutzen, 2002). Our human footprint has had such a major impact on biodiversity that this destruction has been labelled the “Sixth Extinction” (Kolbert, 2014).

2.2.1 Global environment

To address the most critical global issues the United Nations developed the 17 Sustainable Development Goals. Main themes or 5 P's of the Sustainable Goals include people; planet; prosperity; peace; and partnership (UN, 2018b). Rockström and Sukhdev (2016) proposed a depiction of the sustainability goals ‘wedding cake' model in Figure 2.1 that highlight how 13 of the 17 goals have a reliance on the biosphere which is depicted by four goals including climate action, life below water, life on land, and clean water and sanitation. Three further goals have a direct link to environmental management namely: responsible consumption and production, affordable clean energy, and sustainable cities and communities. Noting the interrelatedness of these goals is essential, the protected planet report indicates how increasing the land under protection will affect all 17 goals (UNEP-WCMC and IUCN, 2018).

Figure 2.1: Biosphere underpinning other sustainability goals - Stockholm Resilience Centre

Source: Rockström and Sukhdev (2016)

According to the Living Planet Index 2018 that measures biodiversity loss, the population loss of vertebrates between 1970 and 2018 is a staggering 60 %. The report indicates that the extinction rate is 100 to 1000 times the background rate without human pressure. These biodiversity declines have continued regardless of policy decision to halt or reverse them (WWF, 2018). Nine planetary boundaries have been proposed as crucial issues threatening the health of our planet 1) loss of biosphere integrity (the destruction of ecosystems and biodiversity), 2) climate change, 3) ocean acidification, 4) land system change, 5) unsustainable freshwater use, 6) perturbation of biogeochemical flows (nitrogen and phosphorus inputs to the biosphere), 7) alteration of atmospheric aerosols, and 8) pollution by novel entities, including 9) stratospheric ozone depletion (Rockström *et al.*, 2009). Assessment shows four of the nine has moved out of the safe zone: biosphere integrity; climate change; biochemical flows; and land system change. Freshwater may also have moved out of the safe range (WWF, 2018).

Although continued pressure on the space under conservation is evident, the international drive to secure more space under environmental protection under Aichi 11, has yielded positive results. The protected planet report 2018 indicates that good progress is being made to achieve the world Aichi target of 17% of land under protection. Global coverage of terrestrial protected areas

increased from 0.03% in 1900 to 14.7% in 2016, and the latest reports suggest we achieved 14.9% in 2018, marine protected areas have also substantially increased (Rosling, Rosling and Rosling Rönnlund, 2018; UNEP-WCMC and IUCN, 2018). This growth has however not been able to stop the continued pressure on biodiversity globally. In 2018 only 21% of Key Biodiversity Areas were fully covered by protected areas, and 35% had no protection 21% of IUCN threatened species are found in these Key Biodiversity areas, and of these sites, only 13% are within fully protected areas (UNEP-WCMC and IUCN, 2018). The critical mass of formally protected areas even at 17% is thus not enough to curb biodiversity loss.

2.2.2 The South African environment

South Africa is one of the most biologically diverse countries in the world and is home to over 95000 known species. Contributing to the world species: 6% in plant species; 5% in reptile species; 8% in bird species; 6% in mammal species. South Africa hosts a large number of endemic plants, Amphibians, Reptiles, Freshwater fish and Butterflies. As can be seen in Table 2.1 the number of threatened species are high: 20% of inland Mammals; 21% of freshwater fish; 16% of Birds; 14% of Amphibians; 9% of reptiles; 7% of butterflies; and 12% of plants. The most pervasive threat to these threatened species is habitat loss for the cultivation of crops; infrastructure development; urban expansion; timber plantations and mines. Fragmentation is of the conservation areas is also a threat. Further threats to species include; invasive or alien species; habitat degradation; harvesting; hunting or poaching and illegal trade of species. Other vital threats include climate change and alteration and pollution of freshwater systems (Department of Environmental Affairs, 2014).

Table 2.1: Species status in South Africa

Taxonomic group	# described taxa*	# threatened	% threatened	# extinct	# endemic to SA	% endemic to SA	% of Earth's taxa	Most recent Red List
Plants	20 692	2 505	12%	40	13 203	64%	6%	2011
Inland mammals	307	60	20%	3	57	19%	6%	2004
Birds	851	133	16%	2	38	4.5%	8%	2014
Amphibians	118	17	14%	0	51	43%	2%	2010
Reptiles	421	36	9%	2	196	47%	5%	2011
Freshwater fish	114	24	21%	0	58	51%	1%	2007
Butterflies	793	59	7%	3	415	52%	?	2011

Table notes:

* A taxon (plural taxa) is usually a species but in some cases may be a subspecies or variety.

** Figures for birds are based on BirdLife South Africa's recently completed Red List for birds of South Africa (including the Prince Edward Islands), Lesotho and Swaziland, which will be published shortly.

Source: Department of Environmental Affairs (2014:11)

South Africa hosts three of the worlds biodiversity hotspots including Succulent Karoo; Cape floristic region; and the Maputuland-Pondoland-Albany, these regions can be extended to five if the coastal forest of Eastern Africa and Eastern Afromontane is included (Department of Environmental Affairs, 2014). Over 18% of South Africa's natural habitat has been lost with the majority in the last century, habitat loss is the most pervasive threat to plant species as seen in Figure 2.2. Over 40% of South Africa's terrestrial ecosystems are threatened with 9% critically endangered, 11 endangered and 19% vulnerable. Of the ecosystems, the Indian Ocean coastal belt, Grassland, Fynbos and forest biomes are most threatened. The biomes least protected are Grassland, Thicket and Nama-Karoo and the best protected include Fynbos, Forest and Desert (Department of Environmental Affairs, 2014). According to the Department of Environmental Affairs (2014), 7.8% of terrestrial land was under official protection with a target of 20% by 2020.

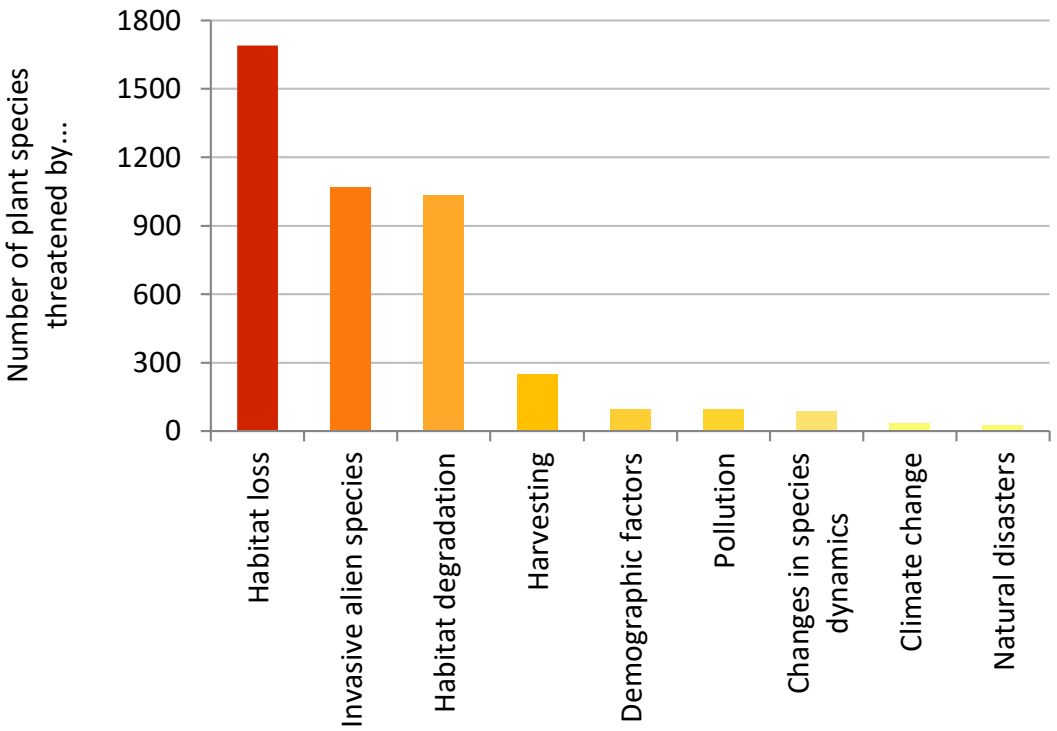

Figure 2.2: Analysis of the threat of plant species

Source: Department of Environmental Affairs (2014)

Some of the critical initiatives South Africa has embarked on for increased biodiversity protection has yielded results. A focus on biosphere reserves has resulted in the country now sporting six biosphere reserves. The biodiversity stewardship program has resulted in an increase in land under management. An increase in protected land from 6.5% to 7.8% (Including some private land) has been achieved. This falls far short of the global Aichi 11 target of 17% for global land

under management. Social advances have also been made with the people and parks program as well as the land reform biodiversity stewardship program (Department of Environmental Affairs, 2014).

Inclusive solutions must be found to reduce continued habitat loss and expand the land under protection substantially. Private game ranches are currently not included in this national number and with proper regulation may support this strategy.

2.2.3 Protected areas, conservation and game ranching

Three of the leading indicators the IUCN uses to measure a country's natural capital and its commitment to preserving it include: total known species (biodiversity), endangered species as a percentage of total species (conservation of threatened species) and national protected areas as a percentage of total land area (Marton-Lefevre and McCool, 2008). The study touched on the first two indicators, and the main focus will, however, be on the land allocated to protected areas and conservation areas. According to the IUCN "Protected areas are widely regarded as one of the most successful measures implemented for the conservation of biodiversity, drawing upon traditional and community-based approaches, governance regimes, scientific and traditional knowledge and contemporary practices of governments and conservation agencies" (IUCN, 2014)

The Aichi Biodiversity target 11 strategic plan for biodiversity 2010 - 2020 was adopted by parties to the Convention on Biological Diversity (CBD) and has the following target "By 2020, at least 17 per cent of terrestrial and inland water areas and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well-connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscape and seascape" (CBD, 2011: para 11). In the protected planet report IUCN (2018) defines a protected area as "a clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long term conservation of nature with associated ecosystem services and cultural values" and indicates the global terrestrial coverage at 2018 to be 14.9% (UNEP-WCMC and IUCN, 2018: 2).

According to Dry (2016) the COP17, CITES, IUCN, and Red data list 2015 do not recognize animals on private wildlife ranches as 'wild animals'; do not recognize semi-extensive wildlife ranches as the wild; does not contribute to conservation; NEMBA (National Environmental Management: Biodiversity Act) and thus DEA do not count or recognize animals on private game ranches. This is contrasted by the statement "the IUCN, however, maintains a wide and inclusive

definition and promotes the appropriate recognition of all forms of protected areas; however they are established, governed and managed, allowing also for the recognition of a variety of 'other effective area-based conservation measures" (IUCN, 2015: xxiii). South Africa according to the fifth national report to the convention of biological diversity submitted the protected land in South Africa as 7.8% at the end of 2013, and this report states that this includes some unverified private reserves (Department of Environmental Affairs, 2014). The official protected area submission that CBD publishes however still indicate the 6.5% which is the 2011 figure (CBD, 2018).

The fifth national report to the convention of biological diversity indicates that private land is added to the national conservation area through the biodiversity stewardship program, the Department of Environmental Affairs create contractual agreements with private landowners according to the Protected Areas Act this land, which is owned and managed by private owners, form part of the protected area expansion targets. Clear differentiation is made in South Africa between protected areas which are formally governed by the protected areas act and conservation areas which have conservation-related goals according to the act (Department of Environmental Affairs, 2014).

2.2.4 Protected areas in South Africa

According to the latest South African Protected Areas Database presented in Table 2.2 (Buys, 2018b; SAPAD, 2018), 1610 sites are under management in South Africa. Almost half of these sites (730) are based in the Limpopo and Western Cape province. According to the National Environmental Management: Protected Areas Act, 2003 and the National Environmental Management: Protected Areas Amendment Act, 2014 the latest classification of protected areas in South Africa, "'national protected area' means: (a) a special nature reserve; (b) a national park; [or] (b) a marine protected area; or (c) a nature reserve or protected environment managed by a national organ of state; or which falls under the jurisdiction of the Minister for any other reason;'' (South Africa, Protected Areas Amendment Act, 2014, s 1e).

Table 2.2: Number of protected areas South Africa by Province

Province	Number of Protected Areas
Limpopo	396
Western Cape	334
Free State	249
Mpumalanga	157
Kwazulu Natal	146
North West	112
Eastern Cape	110

Gauteng	64
Northern Cape	42
Total	**1610**

Source: Buys (2018b) Data source SAPAD (2018)

Figure 2.3 provides a depiction of the type of protected areas, their location and size, according to the SAPAD database. The majority of the Protected Areas in South Africa are classed as Nature reserve 1389 although the area under management for all Nature Reserves combined is similar in size to the land under management in the 21 National Parks. Forest Nature Reserves account for 52 sites and Protected environments 28 (Buys, 2018b; SAPAD, 2018).

Although the protected areas in South African have formal classifications as stipulated above, they can be classed according to where management responsibility is placed. In South Africa Nature reserves can be managed by teams reporting to provincial management bodies (declared under the National Environment Management: Protected Areas Act 57 of 2003) such as Cape Nature, Ezemvelo KZN Wildlife and Gauteng Provincial Nature Reserves. Municipal Nature Reserves are declared through various provincial and municipal declarations and by-laws and fall under the management and budgetary control of municipal conservation management authorities (Compaan *et al.*, 2014).

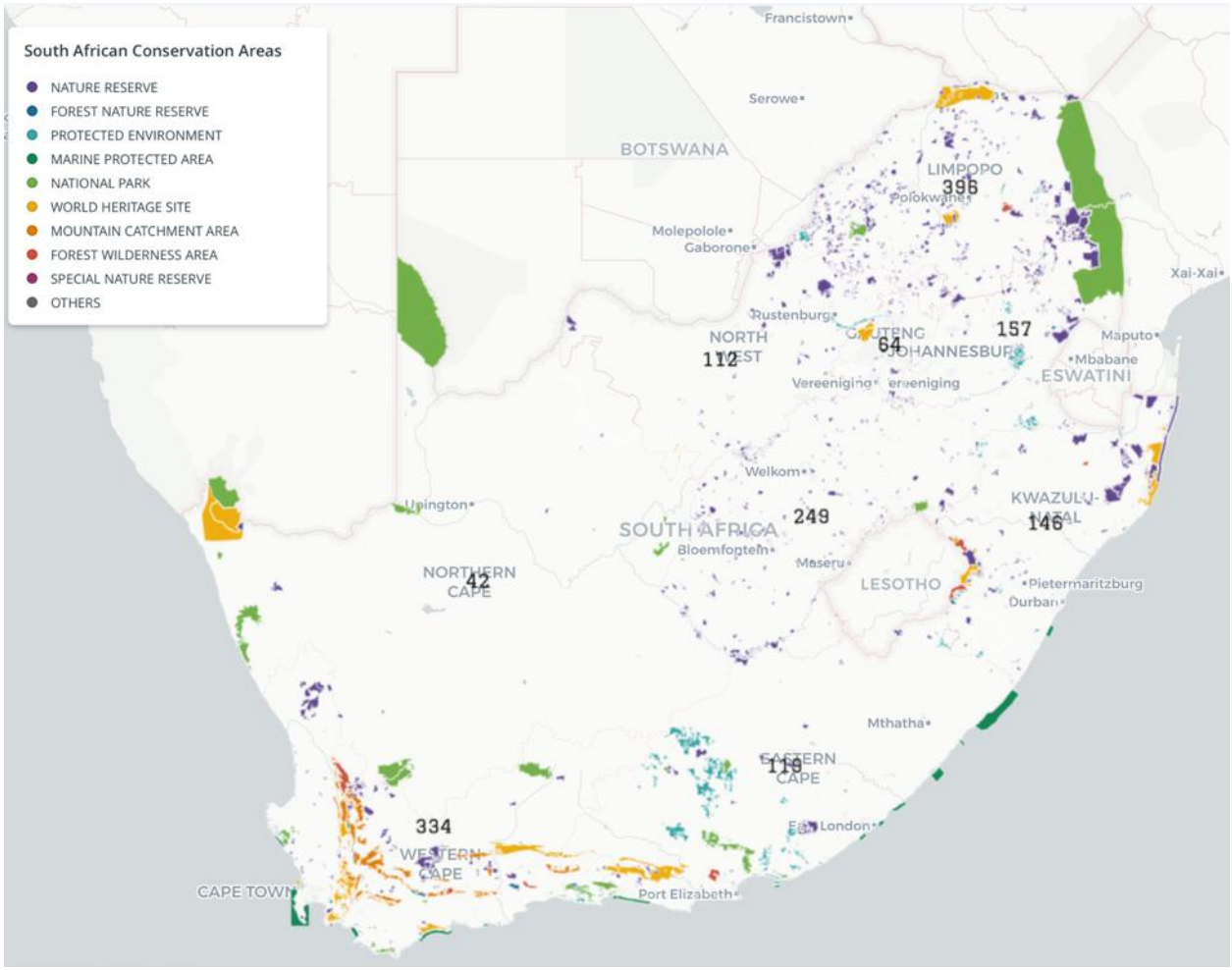

Figure 2.3: Protected Areas in South Africa

Source: Buys (2018b) Data source SAPAD (2018)

According to the IUCN protected areas can be categorised in six categories namely Ia Strict Nature Reserve; Ib Wilderness Area; II National Park; III Natural Monument; IV Habitat/ Species Management; V Protected Landscape/ Seascape and VI Protected Area with Sustainable Use of Natural Resources. The IUCN categories can be loosely equated to the South African classification in Table 2.3 (Ross Paterson, 2009; CER, 2018).

Table 2.3: IUCN and South African Protected Areas

IUCN Classification	South African Classification
Ia Strict Nature Reserve	Special Nature Reserve
Ib Wilderness Area	
II National Park	National Park
III Natural Monument	Nature Reserve
IV Habitat/ Species Management	Nature Reserve

V Protected Landscape/ Seascape	Nature Reserve/Protected Environment
VI Protected Area with Sustainable Use of Natural Resources	Protected Environment

Source: Ross Paterson (2009: 20) and IUCN (2008)

According to IUCN tourism and recreation is a primary, secondary or potentially applicable objective for all except category 1a (IUCN, 2008). The protected areas focus in this research will be National Parks, habitat and species management, protected landscapes and protected area with suitable use of natural resources:

- **Category II National Park**. A natural area of land and/or sea designated to (a) protect the ecological integrity of one or more ecosystems for present and future generations; (b) exclude exploitation or occupation inimical to the purposes of the area; and (c) provide the foundation for spiritual, scientific, educational, recreational, and visitor opportunities all of which must be environmentally and culturally compatible.

- **Category IV Habitat/ Species Management**. An area of land and/or sea subject to active intervention for management purposes to ensure the maintenance of habitats and/or to meet the requirements of specific species.

- **Category V Protected Landscape/ Seascape**. An area with coast and sea, as appropriate, where the interaction of people and nature over time has produced an area with significant aesthetic, ecological and/or cultural value and often with high biological diversity. Safeguarding the integrity of this traditional interaction is vital to the protection, maintenance and evolution of such an area.

- **Category VI Protected Area with Sustainable Use of Natural Resources**. An area containing predominantly unmodified natural systems managed to ensure long term protection and maintenance of biological diversity while providing at the same time a sustainable flow of natural products and services and at the same time to meet community needs (IUCN, 2000:9).

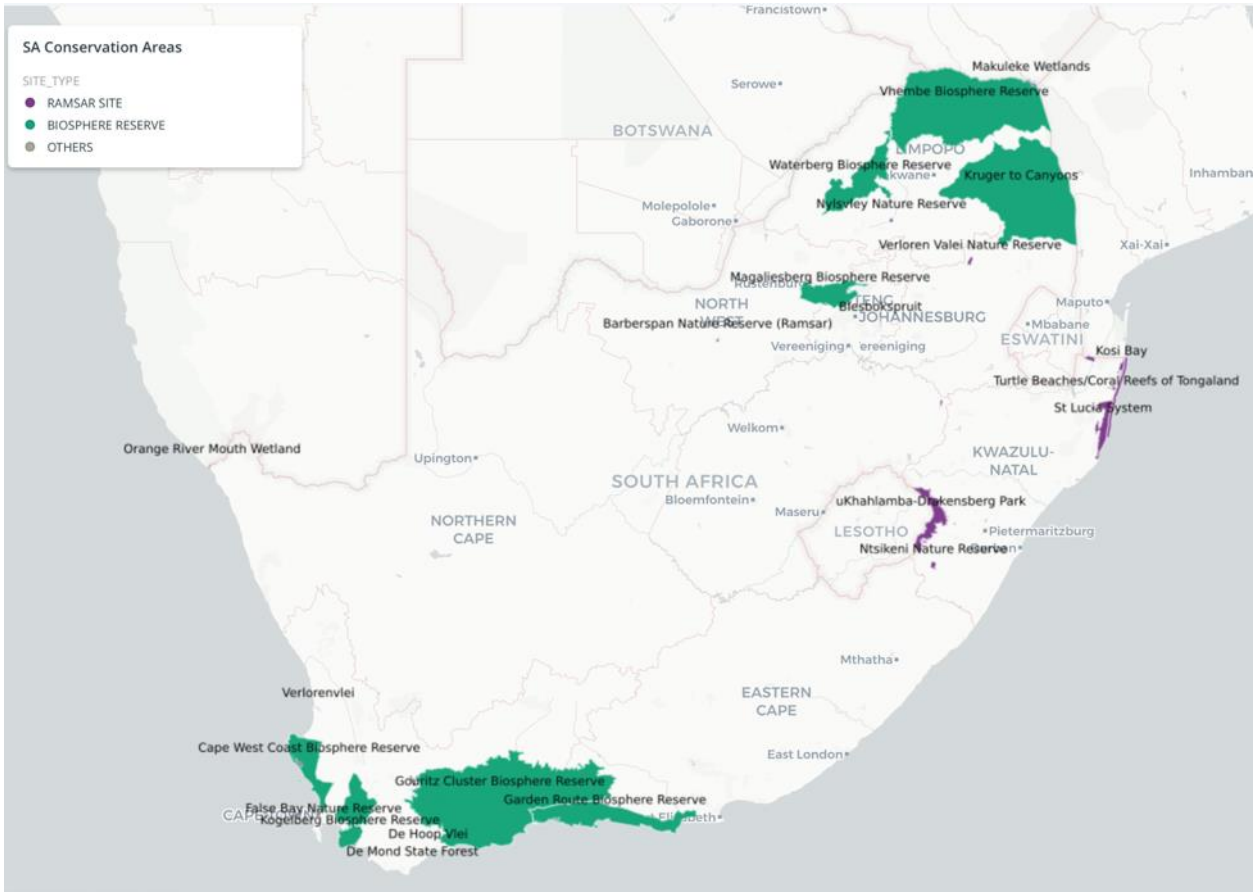

Figure 2.4: South African Biosphere Reserves

Source: Buys (2018a) Data source (SACAD 2018)

South Africa has also focussed on the expansion of its UNESCO Biosphere Reserve program through its South African Strategy for Biosphere Reserve Program (2016-2020). The strategy has the goal “To support, promote and demonstrate within Biosphere Reserves a balanced and sustainable relationship between socio-economic development, the conservation of biodiversity and the sustainable use of natural resources on which people’s livelihoods depend” (Department of Environmental Affairs, 2016: 14). In 2018 South Africa has ten proclaimed biosphere reserves depicted in Figure 2.4, of which four was proclaimed since 2015 namely Gouritz, Magaliesberg, Garden Route and Marico. Other Biosphere Reserves include Kogelberg; Cape West Coast; Waterberg; Kruger to Canyons; Cape Winelands; Vhembe and Cluster (UNESCO, 2018a). According to UNESCO, the main characteristics of a Biosphere Reserve are that they aim to integrate conservation, development and logistic support through multi-stakeholder engagement, governance, education and dispute resolution to grow areas under conservation at a higher pace than traditional conservation. (UNESCO, 2018b).

2.2.5 South African game ranches

The study aims to find strategic drivers in various types of protected areas as well as conservation areas which include wildlife ranches. Game ranches have critical importance to the study due to their impact on South African conservation.

Table 2.4: Land allocated to agriculture and conservation in South Africa

Activity	Surface Area (million hectares)	% of Agricultural Land	% of SA
Government	7.5	7.4	6.1
Commercial Ranches	20.5	20.4	16.8
Conservation	28.0	27.8	22.9
Other Agriculture	72.6	72.2	57.3
Total	100.6	100	82.2

Source: Oberem (2016:12)

The land allocated to South Africa's estimated 10000-11000 (Dry, 2016) commercial game ranches as depicted by Table 2.4 is 16.8% more than double the land allocated to protected areas and a substantial opportunity for conservation and biodiversity. Game ranches house an estimated 20 million head of game and conserve key and endangered species including 30% of South Africa's White Rhino; Black Rhino 23%; Cape Mountain Zebra 31%; Blesbuck 90%; Bontebok 87.5% and the vast majority of South Africa's Sable (97%) and Roan antelope (92%) and Black Wildebeest (87%) (Dry, 2010; Oberem, 2016b). Game ranching provides an environmentally friendly alternative to cattle farming. Unlike domesticated species game species are adapted to marginal land and make use of various strata of vegetation including shrubs and trees having less impact on their environment. Game species also cope with lack of water, disease, parasites and poisonous plants better than domestic species (Oberem, 2016b).

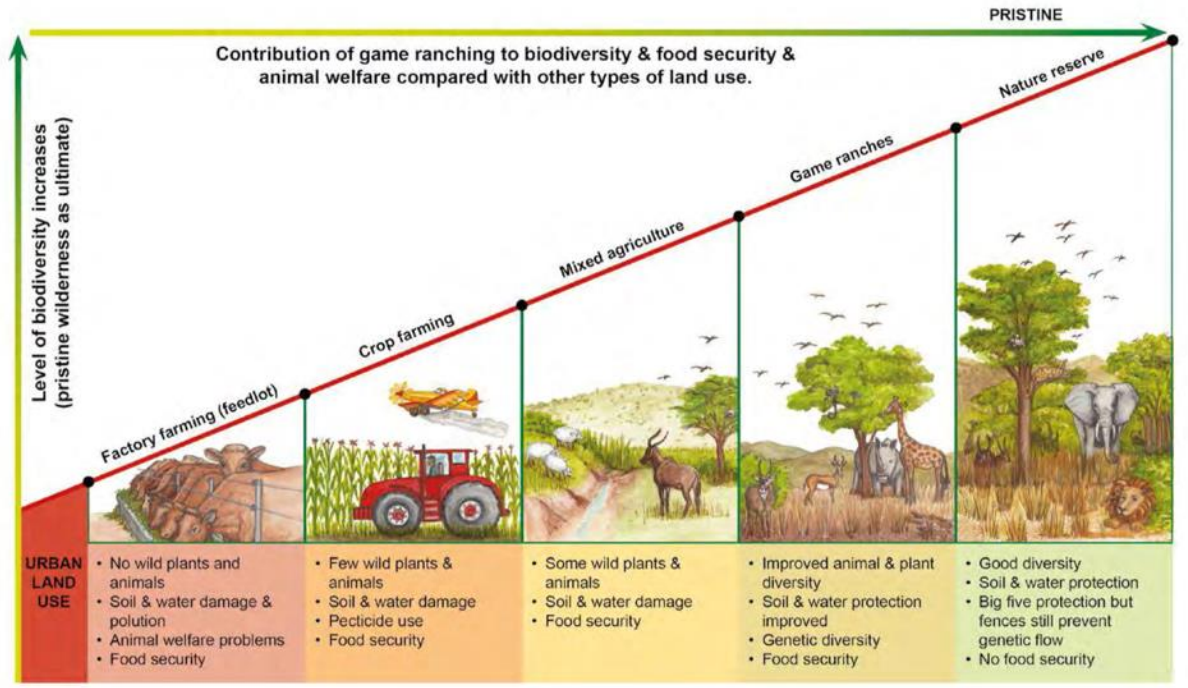

Figure 2.5: Comparison of biodiversity of various activities

Source: Oberem (2016:8)

Oberem (2016b) introduces a comparison of biodiversity of various activities in a depiction of the agricultural land use, game farming and conservation. As can be seen in Figure 2.5 by moving from traditional agriculture to mixed agriculture a positive influence on biodiversity through the inclusion of native plants and animals. Expanding further to pure game farming improved animal and plant diversity is achieved. Conservation areas, nature reserves and protected areas with pristine wild areas provide the ultimate in biodiversity. The expansion of this study by including protected areas, conservation areas and game ranches in one study has the advantage of expanding the strategic framework to include more industries which form part of strategic decision making due to its significant impact on performance.

The South African protected areas and game ranches are custodians of the South African natural environment, which in turn support the global biodiversity and the biosphere with its biotic and abiotic variables.

2.2.6 Conservation Area

As can be seen, the number of definitions, legal terms and classifications in conservation-related research and colloquially are many, as the study scope is specifically kept broad to develop a strategic framework that enables the conservation area management to choose the industry or form of legal identity to adopt when developing a strategic plan for the organization or when setting

up the conservation concern. The term conservation area has been adopted for this study. The Cambridge dictionary defines conservation as “the protection of plants and animals, natural areas, and interesting and important structures and buildings, especially from the damaging effects of human activity” (Cambridge Dictionary, *n.d.* a). The term preservation has been proposed as an alternative to conservation but conservation colloquially and in practice has been aligned closer with it’s environmental application (Buys, 2020).

To describe an area of conservation the above definition can be stated as “An area for the protection of plants and animals, natural areas and interesting and important structures and buildings, especially from the damaging effects of human activity” (Cambridge Dictionary, *n.d.* a). This definition, however, includes important structures and buildings not aligned with the objective of this study. Buckley defines conservation tourism “Commercial tourism which makes an ecologically significant net positive contribution to the effective conservation of biological diversity” (Buckley, 2010:2) a definition discussed further in section 2.5.5. This definition provides a much clearer description when adapted to the conservation area as ‘a managed area which makes an ecologically significant net positive contribution to the effective conservation of biological diversity’.

The definition of the term conservation area derived from Buckley (2010) will be the definition ascribed to the term conservation area in this study. It is important to note, that humans are not just custodians of the environment as presented in the definition, but as humans, we are also wholly dependent on nature for our survival.

2.3 Humans and our environment

Human interaction with the environment has been described from the earliest text. Historically humans have lived much closer to nature, today 55% live in cities, the UN project that due to global urbanisation 68% of people will live in cities in 2050. In North America, 82% of citizens already live in cities (UN, 2018a). Human impact on the environment as has been shown in previous sections. Conservation and environmental actions, however, impact people as well, in perceived positive and negative ways. The UN has focused on bringing communities closer to protected areas by sharing ecological resources (Aichi 14) and to ensure protected areas involve communities in their planning, Aichi Targets 18 address this.

- **Aichi 14**: By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable.

- **Aichi 18**: By 2020, the traditional knowledge, innovations and practices of indigenous and local communities relevant for the conservation and sustainable use of biodiversity, and their customary use of biological resources, are respected, subject to national legislation and relevant international obligations, and fully integrated and reflected in the implementation of the Convention with the full and active participation of indigenous and local communities, at all relevant levels (CBD, 2011).

As Burgoyne and Mearns (2017) in their study of Serengeti National Park and the Ololosokwan community have shown to build trust between conservation areas, communities and other stakeholders take a long time and conflict continue. Due to the different needs, agendas and different perceptions of the issues between stakeholders the inclusion of all parties in decisions as laid out by Aichi 18 become very difficult. Human interaction, societies and systems are complex when people are struggling to feed their families and fighting for space to live it is tough to provide explanations on why it is essential to save ecosystems and conserve for future generations. It is thus crucial that communities share in the ecosystems services that the conservation area provides to improve their health and wellbeing. Providing opportunities for economic activity for the community will not only assist in addressing some of these maintenance issues but can provide some psychosocial benefits (Gossow, Buys and Mearns, 2016).

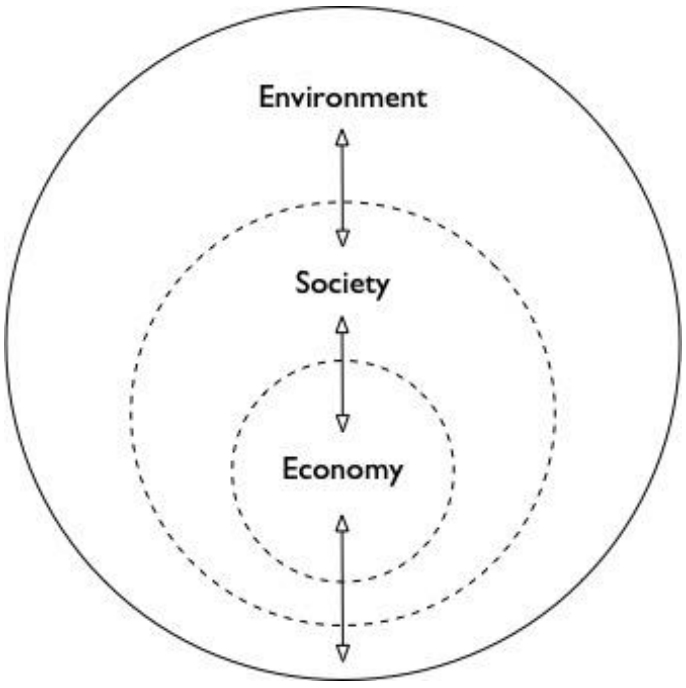

Figure 2.6: Sustainability Representation

Source: Researcher's compilation adapted from WWF (2014), Mebratu (1998) and Lozano (2008)

Figure 2.6 depicts the environment, and its interaction with society and the economy by using non-concentric circles is abounding in literature, the 2014 Living planet report starts with such a

depiction with the caption "Ecosystems sustain societies that create economies" (WWF, 2014:8). Usually, the depiction is presented with solid lines between economy, society and nature (Mebratu, 1998; WWF, 2014). Lozano (2008) argues that this depiction is anthropocentric due to the depiction of the economy at the centre. He proposes a three-dimensional depiction to show interaction. To simplify his model dotted lines and arrows replaced the fixed lines separating the circles were added to show bidirectional interaction. As can be seen in the Ololosokwan example it is critical to get this balance right. Communities rely on their economic activity without it they likely will not be able to carve out a sustainable living (Burgoyne and Mearns, 2017). To merely dismiss it as anthropocentric will deny the realities of community and will not yield results.

As people's perceptions are susceptible to biases and heuristics (Kahneman, 2011), management will yield a limited result if it tries to provide for environmental and community needs without taking individual perceptions into account and managing for those perceptions.

2.3.1 Environmental perceptions

Not everyone agrees about what perception exactly is, and after years of study and debate, we do not precisely understand perception and its boundaries. Rogers (2017:1) proposes that perception can be defined in two ways "First, it can refer to our experience of seeing, hearing, touching, tasting, and smelling objects and individuals in the surrounding world." Secondly, it refers to "the processes that allow us to extract information from the patterns of energy that impinge on our sense organs." According to Sternberg and Sternberg (2015:109), perception can be defined as "the set of processes by which we recognise, organise and make sense of sensations we receive from environmental stimuli." Two major approaches or schools of perception has developed over the years.

According to Rogers (2017), three theories exist about perception: direct; indirect (constructivist) and computational. Two major approaches highlighted by Sternberg and Sternberg (2015) are the top-down and bottom-up approach, where top-down refers to the constructivist approach and bottom-up the direct approach. According to the constructivist indirect theory of our knowledge and experience as well as our unconscious inferences, this intelligent thought like processes determines how we see the world. The direct theory implies that the information that reaches our senses are rich and only need to be picked up. Finally, the computational theory states that perception is a complex information-processing task (Rogers, 2017). The bottom-up approach is a stimulus, data-driven approach, where we look at something and data is transported to the brain.

Four main bottom-up theories can be highlighted including direct perception; template theories; feature theories and recognition-by-components theory. The direct theory states that the real world has sufficient detail and we do not need a higher cognitive activity to perceive. According to the feature matching theory we attempt to match features from our environment to our memories when we perceive. Template theories propose that our mind holds myriads of templates which it aims to match our environment. The feature matching theories propose we try and match features stored in memory rather than match whole patterns. Finally, the recognition-by-components shows how our perception uses a 3D mental representation of objects by observing the edges (Sterneberg and Sternberg, 2015). The top-down constructivist approach recognises perception as constructive perception. The approach proposes that our cognitive processes influence what we see.

What we see is very important, but we also use our experiences, memories and other higher-order thinking to build perception. The constructivist approach view is that perception is based on: "what we sense (the sensory data); what we know (knowledge stored in memory); and what we infer (using high-level cognitive processes). Sternberg and Sternberg indicate that a combination of the two approaches may be an excellent way to approach perception, to understand that the truly direct method as proposed by Gibson in 1979 may be too simplistic (Sterneberg and Sternberg, 2015). Van Deventer and Mojapelo-Batka also indicate the variables that influence perception are: the characteristics of the stimulus; the state of the nervous system; and the person's characteristics and experience (van Deventer and Mojapelo-Batka, 2013). What is clear is that perception is our sensory, visually-driven way to connect with the world and according to Kahneman, Slovic and Tversky how we perceive the world is impacted by heuristics and biases (Kahneman *et al.*, 1974).

Kahneman may describe a helpful theoretical approach to help us, in his book ‘Thinking fast and slow' propose that our brain uses two methods of coming to conclusions: the first system one or the fast thinking system and system two or the slow system. The fast-thinking system makes us jump to conclusions and are mainly responsible for our biases and heuristics. The slow thinking system uses much energy and gets called on to reason when we do a mathematical calculation for example (Kahneman, 2011). Three main heuristics are described which are made up of numerous biases: representativeness describes how humans are quite bad at providing probabilities; the availability heuristic describes how we make decisions only on available information, and adjustment and anchoring show how we anchor to initial proposed states (Kahneman *et al.*, 1974).

So why do perceptions matter for strategic conservation management? The best places to intervene in a system turns out to be goals, rules and mindsets (Meadows, 1999; Heinberg, 2018). Meadows, in a simple diagram (Figure 2.7), shows why perceptions are so important.

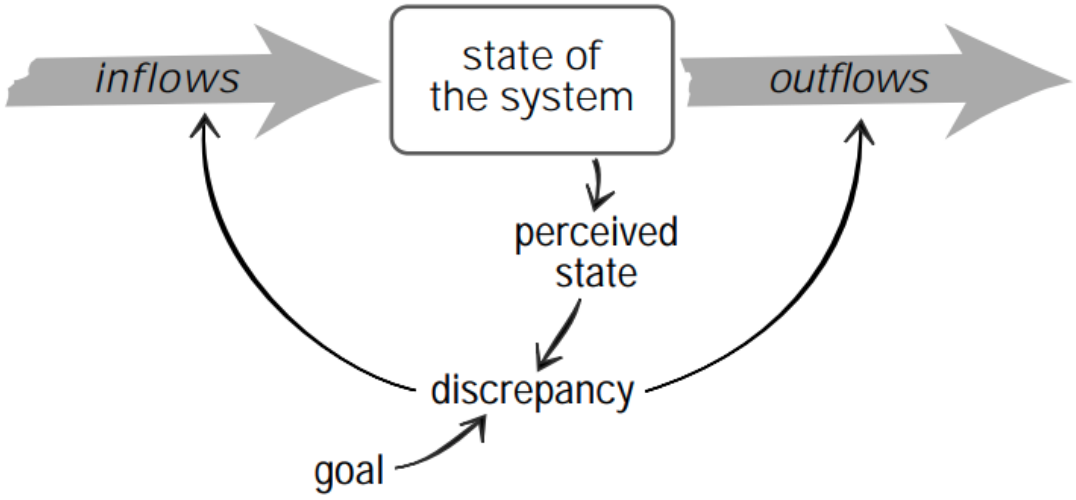

Figure 2.7: State of a system

Source: Meadows (1999)

The stock in or the state of a system is affected by our perceptions of it. In the case of the amount of land under conservation. If we assume South Africa has too little land under conservation (Actual conserved area vs AICHI 11). However, South Africans perceive the land under conservation to be sufficient the discrepancy between the actual state and the perceived state would affect decision making and goals set by the government and other stakeholders. Increasing land for conservation may not be a top of mind concern when the public goes to the polls to vote for their respective party.

It is necessary to note that perceptions and human decision making are a complex subject and discussions related to South African environment perceptions are affected by the respondent's background; state-of-mind; values; socio-economic group and other variables like the availability of information in the media affect their response (Anderson *et al.*, 2007; Hunter, Strife and Twine, 2010). Clear links have been shown to exist between peoples values, beliefs, gender and their likelihood of environmental concern (Stern and Dietz, 1994). Indications are that rural South Africans do have environmental concerns, but not in the typical western sense. Rather than having an overall environmental concern their concern is more at the community level with local pollution and is related to social concerns (Anderson *et al.*, 2007; Hunter, Strife and Twine, 2010).

Rural residents environmental concerns such as litter, lack of rain, soil quality, fires, water and air quality were shown to be related to social needs such as resource needs, livelihoods and well-being (Hunter, Strife and Twine, 2010). They are indicating the interrelatedness of the environment, society and the economy. Perceptions do not only apply to the general public but also strategic decision making at the management level; we are all human.

2.3.2 Planning and decision making

Perception, Biases and Heuristics also influence our strategic thinking and decision making it is thus critical for the decision-maker firstly to understand these biases and heuristics to improve decision making. Strategic decision making needs to move the planner out of the intuition frame of thinking to a reasoned thinking state. Strategy textbooks are adorned with images of chess boards, according to Nassim Taleb equating real life to games constitutes a 'ludic fallacy' due to their narrow world (Taleb, 2007). Ultimately strategic decision making does not conform to such a narrow world, environment or rules. As humans, we rely on our models and mental models (Meadows, 2009) to make sense of the world and make decisions through planning, or in a worst-case scenario we utilise our intuition to make the decision.

Kahneman (cited in Zulz, 2018: para 3) in his address to the World Business Forum in New York indicated intuition is defined as "knowing without knowing how you know", this he indicates is wrong as according to this intuition definition your intuition is always right. He proposes a better definition for intuition is "thinking that you know without knowing why you do" (Zulz, 2018: para 4). He proposes that to trust your intuition it has to comply with three requirements:

1. There has to be a stable environment (regularity) (Kahneman cited in Zulz, 2018) - an example here could be of chess where the chessboard and moves are known. Strategic decision making is the decisions that link the organisation with its external environment, this external environment is complex, certainly far more so than a chessboard. The conservation area manager has to make decisions taking into account stakeholders, environmental variables and internal variables, all complex environments in their own right.

2. Opportunity to get lots of practice (Kahneman cited in Zulz, 2018) – in the chess example chess masters get much practice to build intuition. The strategic environment in its definition does not comply with this requirement as historical strategic decisions are long term decisions and include the sticky decisions of significant investments and commitments in most cases much practice is not possible, in many cases these decisions will only be made once.

3. Immediate feedback (Kahneman cited in Zulz, 2018) – as in the game of chess, by getting immediate feedback if the move was good your intuition could improve. Strategic or long-

range decision making do not provide immediate feedback, and in many cases, it provides no feedback. The decision of introducing tourism to fund a conservation area as an example will take years to deliver feedback on its effectiveness. This effectiveness can also not be evaluated *a posteriori* against any of the alternatives that were part of the decision making.

It is vital to understand decision making in the strategic environment, as strategic decisions are all-encompassing incorporating a multitude of variables how we make these decisions are necessary. Michael Porter asserts that the lumpiness of strategic decisions and the importance of making them has turned strategic research focus on how to approach strategic decisions in a rich environment. He asserts this places an essential light on the subject but comes at a cost as it focusses on individual decisions rather than placing a focus on the entire value chain that defines the companies competitive advantage (Porter, 1991). Frameworks and models provide us with prompts on essential variables and moving us out of the intuition type of decision making to an informed decision for conservation area management.

2.3.3 Environmental ethics and governance

Concern for the environment and creatures other than humans developed very early on. An example of this can be found in the words of Siddharta Gautama (c.563-483 BCE), later known as the Buddha whom very eloquently expressed (van Lippe-Bietersfeld and van Tijn, 2005b:32):

Whatever living beings there are,
Weak or strong, large or small,
Seen or unseen, living far or near,
Born or yet to be born
May all beings be happy.

Just like a mother
Would protect with her life her only child,
So one should cultivate an unbounded heart
Toward all beings.

Religion and nature have been intertwined and at odds since the earliest times. The Bible states "God blessed them and said to them, ‘Be fruitful and increase in number; fill the earth and subdue it. Rule over the fish in the sea and the birds in the sky and over every living creature that moves on the ground’" (Genesis 1:28 NIV, 2011). According to Lynn White, the historical roots of our ecologic crisis can be linked to religious beliefs and science and technology as we know it today in the western world with its anthropocentric views developed out of Christian beliefs of man's

transcendence and mastery over nature (White, 1967). Christianity has been blamed by many for much of the destruction that humans have inflicted on the environment.

In South Africa, this ownership derived from Christian beliefs is described by Gareth Patterson as following "the pro-use people see the animals, not as beings with a fundamental, natural right to exist in areas of suitable habitat. Instead, they see wild animals indeed as possessions to be bought, bred, sold and hunted for economic gain" (van Lippe-Bietersfeld and van Tijn, 2005a). The South African private conservation development has however been described as a great success story for conservation (Flack, 2011; Oberem, 2016b). Whether the influence of religion on the environment has been positive or negative billions of people in the world, measure their morals on religious beliefs (VanDeVeer and Pierce, 2003), and 86% of South Africans describe their religious affiliation as Christian (StatsSA, 2015).

Many of the "environmental controversies" we face today are moral or ethical, what humans or moral agents should and should not do. VandeVeer and Pierce (2003) define a moral agent as "a being capable of reflecting on reasons, weighing them and deliberately choosing – normally a member of Homo sapiens." VanDeVeer and Pierce (2003) go further to show the interplay between morals and empirical scientific claims in the environmental sciences. The results from various environmental studies in various fields in environmental science and other fields inform us on which moral assumptions to make and what empirical and moral beliefs to accept. Who's harm and benefit counts? The anthropocentric view is that only humans count and all other inanimate matter and everything non-human has only utility value. This view presumes that only humans have moral standing and is morally relevant for its own sake. If we reject this notion that only humans have moral standing, further very complicated questions are raised.

Where do the lines get drawn for creatures with moral standing? Does a lion (*Panthera leo*) have moral standing, does an ant (*Formicidae*)? The individuals are nonstandard. Rather than individuals do ecosystems have rights? Individuals may not exist yet and maybe future generations, the harm is also due to the acts of many over a very long period and may be linked only to some probability of occurrence. Aside from who's harm or benefit is the relevant notions of premature death, pain and nonfulfillment of wants or desires and how these extend to other beings has to be considered in environmental ethics. It is imperative to understand that the capitalist system with its roots in Adam Smith's ‘An Inquiry into the causes of the wealth of nations' with its utilitarian ("greatest happiness principle") underpinnings is ultimately concerned with the cost and benefit and what harms and helps humans alone. This anthropocentric economic view has been a great divide between environmentalists and the commercially focused (VanDeVeer and Pierce, 2003). This study will by no means form a moral argument, but it is noted that this study does have a utilitarian outlook.

The conservation of wildlife in South Africa was first established due to the pressures on wildlife from hunting, removal of the game to introduce livestock, British scorched earth policy, declaration of individual species as vermin and sickness. President of the Boer republic Paul Kruger declared the first conservation area Pongola in the Kwa-Zulu Natal province on 13 Jun 1894 and the Sabi Game reserve which today is called Kruger National Park on 26 March 1898. Hunting and the decimation of the game continued outside the parks until the proclamation of the Game theft act 105 of 1991 made it possible for farmers to own game. Ironically the hunting that almost destroyed the game in South Africa became the driving force to save it (Oberem, 2016b). Private ownership of game for consumptive use, eco-tourism or as part of the real estate for the pure enjoyment by the wealthy as a truly anthropocentric utilitarian concept saved many species. The demise and subsequent saving of these species as well as other environmental issues the world is facing today may be attributed to the ‘Tragedy of the commons' (Hardin, 1968).

The tragedy of the commons first introduced by an amateur mathematician William Forster Lloyd in 1833 describes how a common pasture open to all is available to two herdsmen each trying to optimise their utility. Each herdsman adds one more animal to his herd which provides them with a positive utility which results in the herdsman adding more and more cattle, and all the herdsman shares the negative utility in the form of the land which ends up being overgrazed. Each is pursuing their own best interest on the common land with limited perceived negative utility, drives to the ruin of all (Hardin, 1968). The game theft act was the solution for the collective destruction of the game in South Africa. The premise of this study will be the sustainable utilisation of nature, aiming to expand the land for conservation by making it financially attractive. As indicated such an argument for the common good or the ‘the greatest happiness' is anthropocentric and does not explicitly address the rights of other natural beings.

Recent animal rights examples in the media include animal activist group Peta (People for the ethical treatment of animals) indicating idioms such as “bring home the bacon” trivialise animal cruelty and called for their replacement in the English language, sparking debate (Brown, 2018). In South Africa, the emotive issue of canned lion hunting and the lion bone trade is creating headlines internationally. Consumers who eat beef served on their burgers with very little information on how these cattle are raised or slaughtered, take part in the lion outcry. What would make a lion (*Panthera leo*) worth more consideration than cattle (*Bos taurus*)? Christopher Stone in his article ‘Should trees have standing? Toward legal rights for natural objects, indicates that human beings have rights, corporations have rights which are different to human rights, and children have rights which are also different to adults, for example, they cannot vote. Every aspect of nature should not have the same rights, a stream for example not the same right as an animal

or a tree, but should be afforded rights (Stone, 1972). The human role in our eco-system is very complex.

Historical wrongs committed against groups of South Africans and their communities is a further example of the complexity where environmental and social issues meet and remind us that environmental ethics is not just about natural objects and animals but people too. An example of such a wrong includes the colonial relocation of communities that lived within the fenced-off area that is referred to as the Kruger National Park today. On 21 May 2016, The Department for Rural Development provided an R84 million compensation to six communities who were forcibly removed following the Native Land Act of 1913 (ENCA, 2016). Developing an understanding of the diverse ethical views people hold; how we could confer rights to natural objects or systems and animals; while respecting the rights of people, is critical to building bridges and foster collaboration for sustainable conservation. Conservation area managers do not only need to consider ethics as it relates to the environment and society but also as it relates to the good governance of the business entity.

Good governance is required not only at a governmental, provincial or municipal level, but also at the management of conservation area level. South Africa has been experiencing increased corruption through state capture and other forms of endemic corruption. This corruption has been directly linked to the increase in poverty in the country (Salahuddin *et al.*, 2019). Good governance is the key to providing ethical leadership. The King IV report defines corporate governance as "the exercise of ethical and effective leadership by the governing body towards the achievement of the following governance outcomes: ethical culture; good performance; effective control and legitimacy". The report highlights four primary roles and responsibilities of the governing body including, steering and setting strategic direction, ensuring accountability, approving policy and planning and overseeing and monitoring (IoDSA, 2016: 20-21).

"Good governance and the elimination of corruption is a must for improving the performance of all sectors of an economy" (Salahuddin *et al.*, 2019: 24). Sustainable development is reliant on integrated thinking, organisations being part of society, including stakeholders and good corporate citizenship (IoDSA, 2016: 23). Divergent goals and a multi-stakeholder environment in which conservation tourism managers operate, provide complexity for strategic planning.

2.4 Systems thinking and complexity

The strategic management of conservation areas is complex due to its complex operating environment. Firstly - global environmental pressures, Zellner and Campbell (2015) note that today we use the "wicked" problems moniker in various cases including climate change and

sustainability describing the global environmental challenge as complex or wicked. Maani also describes the environment as “complex, or ‘wicked’” (Maani, 2016). Secondly - multiple stakeholders, Burgoyne and Mearns (2017) referred to the multi-stakeholder social-environmental problem as studied in the Serengeti National Park and the Ololosokwan community as a complex and wicked problem. Thirdly - the management of an organisation has been referred to as complex or messes, as Ackoff (1979) states “Managers do not solve problems, they manage messes.” It is vital to understand wicked problems and messes and their role in complexity.

2.4.1 Wicked problems

Buchanan quote Rittel from his first known work on wicked problems in 1967 presented by Churchman, Rittel definition of wicked problems is “A class of social problems which are ill-formulated, where the information is confusing, where there are many clients and decision-makers with conflicting values, and where the ramifications in the whole system are thoroughly confusing” (Buchanan, 1992:15). In 1973 Rittel and Webber (1973) dismissed that traditional planning methods can deal with wicked problems “The search for scientific bases for confronting problems of social policy is bound to fail, because of the nature of these problems. They are “wicked” problems, whereas science has developed to deal with “tame” problems.” also, described wicked problems with ten points:

1. There is no definitive formulation for a wicked problem
2. Wicked problems have no stopping rules
3. Solutions to wicked problems are not true or false but good or bad
4. There is no immediate and no ultimate test of a solution
5. Every solution to a wicked problem is a "one-shot operation" There is no opportunity for trial and error
6. Wicked problems do not have an enumerable set of potential solutions, nor is there a well-described set of operations that may be incorporated into the plan
7. Every wicked problem is essentially unique
8. Every wicked problem can be a system of another problem
9. The existence of a discrepancy representing a wicked problem can be explained in numerous ways. The choice of explanation determines its resolution.

10. The planner has no right to be wrong (Rittel and Webber, 1973:161-167).

Zellner and Campbell (2015) draw the linkages and describes overlaps between "wicked" problems and complexity and shows how complexity science today can provide tools for the problems Rittel and Webber (1973) identified. Complexity theory has developed to understand the emergence and non-linearity of the wicked problems. Complexity theory aims to understand and build frameworks for the variables that build wicked problems: interaction, heterogeneity, feedback, neighbourhood effects, and collective interest traps. Complexity theory provides tools to model and simulate alternative futures using today's latest computer technology. Complexity theory cannot solve or "tame" wicked problems but provide the tools to address specific segments of the wicked problems to help model solutions. This complexity has also been described as messes.

2.4.2 Messes

In 1979 Ackoff described that the change over from what he coined the machine age to the systems age where human activity systems were vital, the tools developed for the machine age could not solve the messy problems of the systems age. Ackoff (1979) used the term mess or messes to describe these systems which he defined as follow "Managers are not confronted with problems that are independent of each other, but with dynamic situations that consist of complex systems of changing problems that interact with each other. I call such situations messes." In Ackoff's definition he refers to 'complex systems' he defines them as 'dynamic' and 'interactive' common attributes of complex adaptive systems. Behaviours of such systems depend more on how they interact than the individual parts of the system.

2.4.3 Complex adaptive systems

According to Morin (2007) complexity would appear from the second law of thermodynamics and irreversibility; interaction, order and disorder; and chaos theory. In the forties, the word complexity starts appearing as part of Information Theory, Cybernetics, and General Systems Theory. At the Santa Fe Institute (1984) it will later be defined as "dynamical systems with a substantial number of interactions and feedbacks, inside of which processes very difficult to predict and control take place, as 'complex systems'" (Morin, 2007:5). According to Morin (2007) complexity has evolved over the years into two paradigms of restricted complexity and general complexity. Restricted complexity would for example study interaction of brain neurons through models. General complexity is an overarching paradigm that includes restricted complexity. General complexity asserts that the world is too complex and systems are subject to change, and we can thus not

reduce them to defining laws (Woermann, Human and Preiser, 2018). This study will mainly focus on general complexity.

Melanie Mitchell (2009:3) in her book Complexity a guided tour describes complexity as “an interdisciplinary field of research that seeks to explain how large numbers of relatively simple entities organize themselves, without the benefit of any central controller, into a collective whole that creates patterns, uses information, and, in some cases, evolves and learns.” An eco-system is such a complex entity, where seemingly separate biotic and non-biotic elements come together to form an ecosystem over time. Mitchell refers to the further examples of these self-forming networks; ant colonies; the brain; immune system; economies; and the worldwide web (Mitchell, 2009). Complex systems have specific properties that distinguish them from simple systems (for example a motor vehicle engine) and complicated systems, for example, an aeroplane with its large number of parts.

- Complex systems sport a large number of elements that interact dynamically with each other, the interactions do not have to be physical but can be informational (Cilliers, 1998). Conservation area management operates in an environment where a large number of rich interactions take place. The interactions occur with the external business environment; between stakeholders; within the ecosystem; and between different facets of the organisation.

- It is a precondition that the interactions are non-linear (Cilliers, 1998). Creating a destination for tourists happens in a non-linear fashion, messages and interactions between agents through word-of-mouth and other means create excitement about an attraction which develops a life of its own. Economies, organisations and ecosystems form in a non-linear fashion. Our influence in the design of the systems is usually overestimated.

- The interactions usually have a short-range (Cilliers, 1998). Social media and communications technology have influenced the range substantially. Where physical interactions were necessary for word-of-mouth, social cohesion results through other social channels today. In nature, the eco-system, for example, is determined by the immediate vicinity.

- Feedback loops are present in the interactions, and these feedback loops can have a balancing or a reinforcing effect (Cilliers, 1998). In the example of the formation of a destination, the increased word-of-mouth and advertising will have a reinforcing effect increasing the number of tourists, while the crowdedness of the area will create a balancing effect that will reduce the number of tourists.

- Complex systems are usually open systems that operate far from equilibrium, for complex adaptive systems equilibrium usually represents death (Cilliers, 1998). Complex systems interact with their environment, ecosystems are reliant on the weather and the other environmental variables, conservation businesses are affected by the business environment as well as the physical environment.

- Complex systems have a history and memory (Cilliers, 1998; Swilling and Annecke, 2012). There is a time element to a complex system, it evolves and moves through time and build up distributed memory in the system (Swilling and Annecke, 2012). The organisation is an excellent example where a collective memory; an example of this is how culture is developed over time.

- Each element of the system is ignorant of the behaviour of the whole (Cilliers, 1998). As parts to a system, for example, the organisation, agents do not see the whole picture only their role in the system. As humans, we can build models to simplify and depict complex systems we are part of, but we are oblivious to the interactions that result in crowd formation.

- Complex adaptive systems are usually independent and organise and reorganise without the intervention of an outside agent. It does, however, reorganise and self-adapt due outside pressures (Swilling and Annecke, 2012). Organism's bodies self-organise and adapt to the outside world.

The process of forming such a complex adaptive system is called emergence, and communities develop over time to form a complex adaptive system, a separate entity to the individuals and a new level of complexity. The economy on its own is a complex adaptive system, rural economies develop through various social interactions without design even western economies developed through emergence as Chia and Holt note "The first economists, such as Richard Cantillon, Adam Smith, Frédéric Bastiat and Carl Menger, did not set out to investigate whether there existed something that could be called an economic order. Instead, they noticed economic order and wondered how that had come about without any deliberate design and purposeful intervention on the part of the state" (Chia & Holt 2009:28).

The behaviour and nature of a system get determined by the quality of the interactions. Due to the dynamic nature of interactions, rich communication, non-linearity, the feedback systems and the embedded memory, it is impossible to predict the behaviour of these systems (Swilling and Annecke, 2012). Many futile attempts have been made to predict future economic outcomes, outcomes of elections and other environmental variables. It is thus critical to consider the

complexity of the external environment, the stakeholder relations and the internal environment of the conservation organisation to enable us to develop and manage these entities. IUCN identify the importance to understand complexity as part of the planning process and site these reasons: the interdependence between humans and nature; decisions are made with lack of certainty; the rate of change; different and conflicting values (Spoelder *et al.*, 2015).

The complexity that humans deal with is immense, specifically when it comes to environmental problems and strategic decision making. Nevertheless, the question emerges, how do we deal with these complex problems in conservation area management?

2.4.4 Systems thinking

Donella Meadows (2009:1) proposes that thinking in systems is a solution for dealing with complexity “As our world continues to change rapidly and become more complex, systems thinking will help us manage, adapt, and see the wide range of choices we have before us.” According to Peter Senge (1990:68) in his book The Fifth Discipline "systems thinking is a discipline for seeing wholes, it is a framework for seeing interrelationships rather than things, for seeing patterns of change rather than static ‘snapshots'.” Maani (2016:3) also proposes that systems thinking as a tool "Systems Thinking is the science of integration. It provides a ‘language' for decision-makers, researchers, research managers, policymakers, and knowledge managers to understand the complexity and multi-stakeholder problem-solving.” The complexity described by the authors should be recognised as “General Complexity” rather than specific complexity as described by Morin (2007) for which other tools would be more appropriate.

2.4.4.1 Development of systems theory and its link to complexity

In the 1920's Ludwig von Bertalanffy first mentioned the idea for a new "system theory of the organism.” Bertalanffy indicated that the essence of the living thing is its "organisation, the investigation of single parts and processes cannot provide a complete explanation of this vital phenomena" (Von Bertalanffy, 1972). Discussions around a new discipline start in the, and after world war two in various publications, Bertalanffy proposed the new "General Systems Theory" discipline. Cybernetics also started developing at this time with parallels to general systems theory (Von Bertalanffy, 1972). Certain types of complexity were defined early as part of systems theory. Weaver (1948) introduces the concept of simplicity, organized complexity, and unorganized complexity in “An Introduction to General Systems Thinking” which lays the groundwork for Weinberg’s systems map of randomness versus complexity in 1975 presented in Figure 2.8 (Monat and Gannon, 2015).

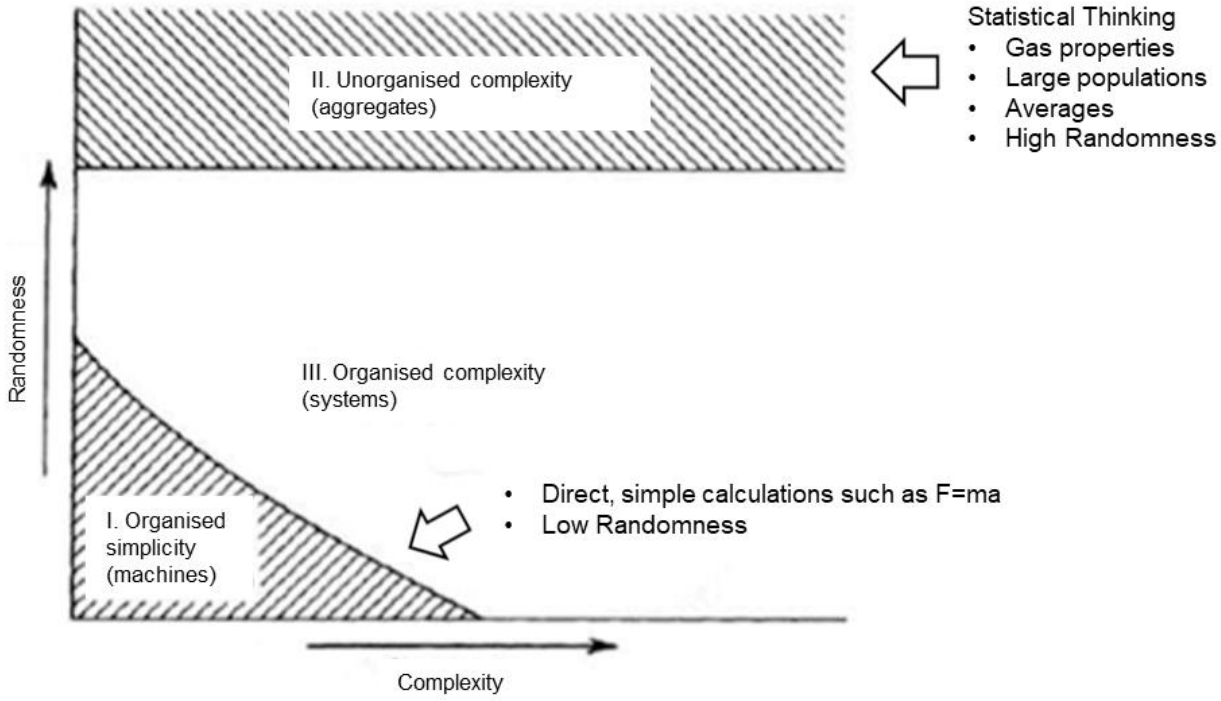

Figure 2.8: Systems map of randomness versus complexity

Source: Weinberg cited in Monat and Gannon (2015)

In 1972 Lovelock and Margulis introduced "complex living systems" in their well-publicised Gaia hypothesis (Lovelock and Margulis, 1974). Ultimately "General Systems Theory" would be one of the theoretical predecessors of complexity theory (Woerman, 2011). Donella Meadows (2009) defined a system as "A system is a set of things—people, cells, molecules, or whatever—interconnected in such a way that they produce their pattern of behaviour over time." Ackoff (1979) proposes a three-step process to understand systems: firstly the parts of the systems needs to be understood as part of many wholes not just taken apart; secondly, the larger containing system needs to be understood; finally, the system needs to be understood regarding its role and function. The systems iceberg 'model' provides a depiction of the systems thinking as in pertains to other levels of thinking.

2.4.4.2 The Iceberg Model

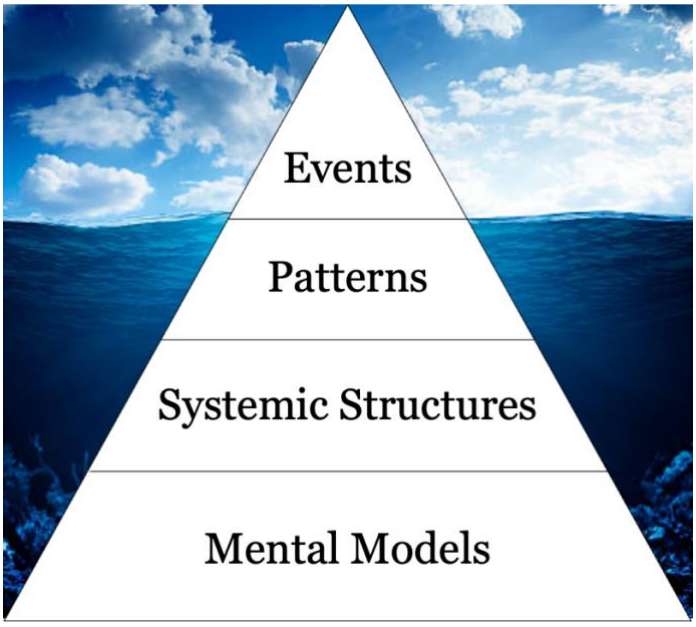

Figure 2.9: The Iceberg Model

Source: Adapted from Maani and Cavana cited in WWF (2016)

Systems thinking introduces the 'Iceberg model', as it is commonly referred to, Maani (2016:79) refers to the model as the four levels of thinking. This systems thinking model presented in Figure 2.9 reminds us to look at the underlying variables that cause the events we notice on the surface. We identify patterns that may cause certain events, but these patterns have underlying systemic causes we need to identify. It reminds us that we see these patterns through a lens that send a signal that passes through our mental models, biases and heuristics affecting our analysis and decisions.

During this study, the underlying systemic structures and mental models will be kept in mind, specifically during the analysis presented in chapter six, where the analysis will be structured to highlight underlying systems and mental models. A CLD can be utilised to model systemic issues in complex systems.

2.4.4.3 The Causal Loop Diagram

Maani (2016) proposes a multi-stakeholder process for decision making to develop solutions using the CLD. Causal loop modelling through the CLD provides a tool for mapping the relationships in the systems.

1. Select the participants, including as many of the stakeholders as possible

2. Understanding and framing the problem clearly, articulating a rich question and highlighting the issues.

3. Systems mapping or modelling, brainstorming variables, grouping these variables, developing CLD from the grouped variables

4. Identify key leverage points

5. Develop intervention strategies (Maani, 2016)

Maani utilised systems thinking and the causal loop diagram in a Siem Reap Project for Sustainable Tourism and Poverty Alleviation. Siem Reap is a World Heritage Site, and part of a Biosphere reserve rich with life and almost 60% of tourists to Cambodia visit it. The area is not only a significant fishing resource, a flood regulator but also houses floating villages. Stakeholders were trained in systems thinking. The stakeholders included the ministry of tourism, NGO's, and a large group of local stakeholders. Two questions were developed: What is the barriers/challenges for sustainable tourism for Cambodia? What are the drivers/variables that affect sustainable tourism for Cambodia? Through a community workshop; systems training; systems workshop; planning workshop and a funders workshop for implementation the project was implemented. The project yielded the following CLD (Maani, 2016).

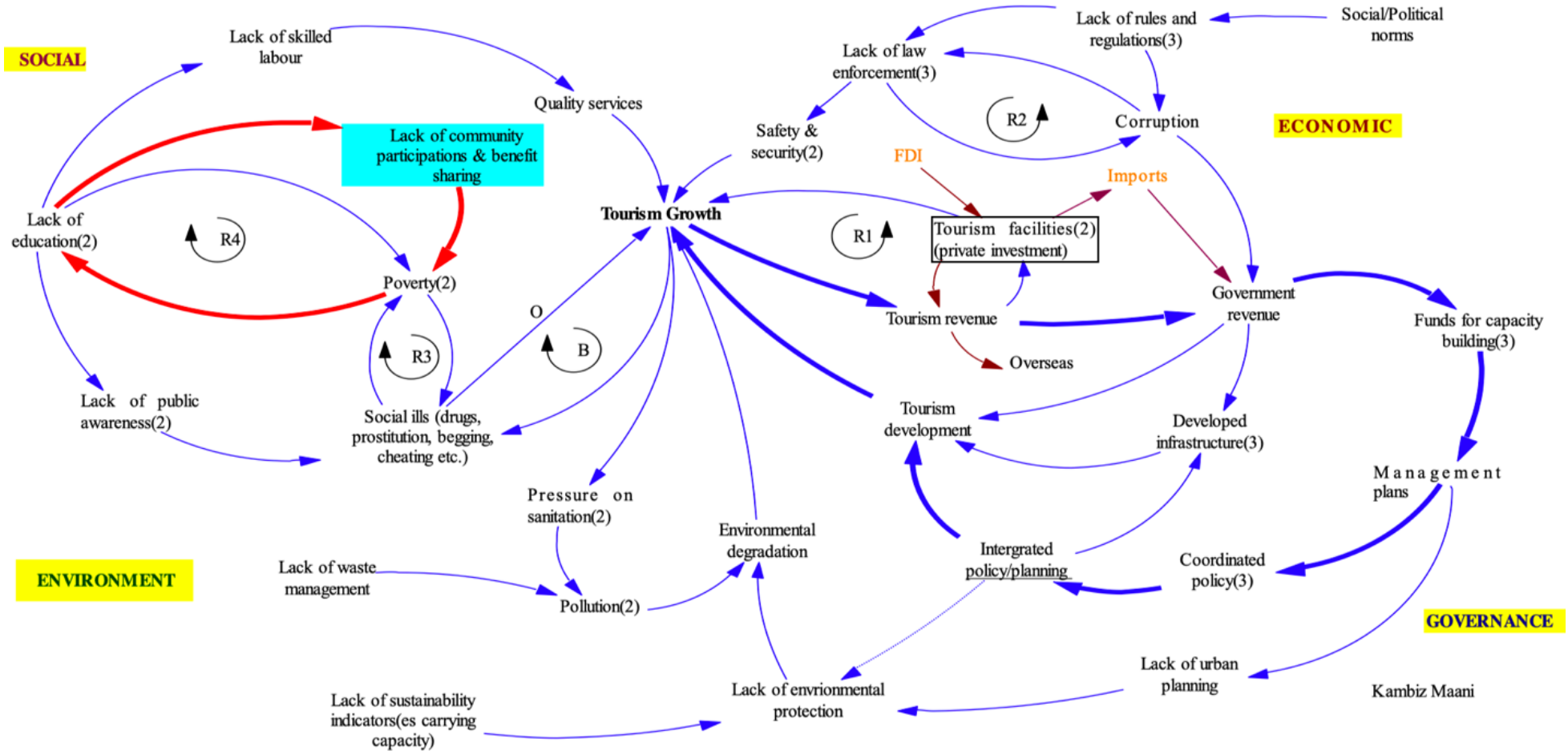

Figure 2.10: Model of Sustainable Tourism in Cambodia

Source: Maani (2016:155)

The CLD indicates the interactions between the various aspects of the system and the feedback loops in the system. The CLD provides an indication which loops are balancing loops and which are reinforcing loops. The CLD gets used to highlight key leverage points where the system can be influenced. As systems are complex leverage points are often counterintuitive, and influence can often result in other than expected outcomes (Meadows, 2009). In the Siem Reap example in Figure 2.10, poverty alleviation was proposed as a crucial leverage point, and five intervention strategies developed: providing land; promote and strengthen legal system; improve literacy; build community capacity based on needs; and improve standards of living (Maani, 2016). Donella Meadows (2009:3) propose 12 examples of leverage points that can be used to influence a system:

1. Numbers - such as taxes, subsidies and standards
2. Buffers – the size of stabilising stocks relative to flows
3. Stock-n-flow structures – physical systems and their intersections
4. Delays – delays of time relative to the rate of system changes
5. Balancing feedback loops – the strength of feedback relative to impacts
6. Reinforcing feedback loops – the strength of the gain of driving loops
7. Information flows – who does and does not have access to information
8. Rules, incentives, punishments, constraints
9. Self-Organisation—The power to add, change, or evolve system structure
10. Goals—The purpose or function of the system
11. Paradigms – the mindset out of which system arises
12. Transcending paradigms

Systems thinking provides the tools to understand complexity through a holistic rather than reductionist viewpoint utilising synthesis. We do however need to understand that systems modelling provides a simplified model and systems thinking, therefore, has limitations. Although systems thinking provides feedback loops, the underlying theory still has linearity built-in through causality. The model is in constant movement and does not allow for history and is thus very well placed for change management rather than day to day management. The systems model is still

reliant on the human observer with his cultures, biases, heuristics and boundaries of knowledge, whom in many cases find himself within the model. This human observer infers causality. There is a problem of boundaries, and no systems model can include everything and systems will behave differently depending on where the boundaries are drawn by the observer (Stacey, Griffin and Shaw, 2000). It is crucial to ensure the model is utilised with the understanding of its limitations and our human ‘bounded rationality'.

As seen, the human cannot be removed from the process, some of the most significant learnings from complexity and systems science include understanding human thought patterns and relationships. The conservation tourism industry, however, also has an economic underpinning presenting itself in the conservation industries.

2.5 Conservation tourism

Choosing between different industries and funding sources require resource commitments and activities aligned with the respective objectives. Choosing the industry that the business operates in is one of the most significant determining variables of profitability. A study conducted in the United States in 628 Industries (SIC) utilising 58132 observations 1985-1992 IRS data indicated that Industry directly accounts for 19% of the aggregate variation in business-specific profits and 36% of the explained variation. Segment-specific effects account for 32% of the variation in profit. Other variances accounted for include in year effects (2%) and stable corporate effects (4%). The performance within the industry is thus crucial, and the decision of which industry to choose can provide a competitive advantage (McGahan and Porter, 1997). The importance of the industry underpins the study design and the reason for studying the strategic management of conservation areas by including public, private conservation areas and their included industries.

Unlike real strategic decision making based on profitability, the private wildlife industry in South Africa has emerged due to a diverse range of investment reasons. Some game ranchers enter the industry due to lifestyle reasons only requiring occasional income through eco-tourism and hunting. Farmers move to game ranching due to marginal land not being suitable for livestock: breeding for conservation purposes, harvesting of sustainable venison and other products such as ostrich and crocodile leather (York, 2016). In many cases, the type of land will determine the type of industry or commercial endeavour is possible. Other industries such as hunting, consumptive tourism, game meat and breading are also critical in the funding of conservation in South Africa. Conservation tourism provides the broadest industry range as it supports various sub-industries and incorporates activities in public and private conservation areas.

This research is not about the impact of tourism but rather has an expansive approach with the objective to grow conservation and conservation areas it is however critical to look at minimising the negative impact of tourism in the framework without reducing the positive impact it could create by increasing the number and size of protected areas. Understanding the overall effect of the conservation area is critical. Sustainable tourism indicators can be utilised for conservation area managers to get a clearer understanding of their impact on the environment and communities. The United Nations World Tourism Organisation sustainable tourism indicators can be used to measure waste, water, energy and environmental impacts as well as community and economic effect but have limitations (Baker and Mearns, 2017).

In the United States, the Limits of Acceptable Change (LAC) was introduced to Wilderness protected areas and National parks because recreational carrying capacity was excessively reductionistic and failing. “LAC is based on the recognition that (1) specific objectives were needed to identify what it was that management was to protect, (2) change is always present in nature-dominated systems, (3) any recreational use leads to some change, (4) management is therefore confronted with the question of how much change is acceptable and (5) monitoring of the outcomes of management is needed to determine if actions were effective” (McCool, 1996:1). Designing these monitoring and feedback systems into the framework is critical.

This this section will first look at tourism and its role in conservation and then provide an outline of the nature based, wildlife and ecotourism sectors and how they differ. The section define conservation tourism and assimulate an outline of the conservation tourism industry this study focusses on.

2.5.1 Tourism and its role in conservation

Tourism is the world's largest and fastest-growing industry. According to the WTTC, tourists, directly and indirectly, supports over 260 million jobs and generated 9% of the world's GDP in 2012. Over 1 Billion people travelled internationally in 2012 (George, 2013). The United Nations World Tourism Organisation (UNWTO, *n.d.*: para 1), defines tourism as: “a social, cultural and economic phenomenon which entails the movement of people to countries or places outside their usual environment for personal or business/professional purposes. These people are called visitors (which may be either tourists or excursionists; residents or non-residents) and tourism has to do with their activities, some of which involve tourism expenditure.” George (2013) goes further to indicate that a tourist has to be away from home for longer than 24 hours or he will be defined as an excursionist according to UNWTO. He highlights the following from the above definition. Tourism is about: The United Nations World Tourism Organisation (UNWTO, 2004), defines tourism as: “the activities of persons travelling to, and staying in, places outside their usual

environment for not more than one consecutive year for leisure, business and another purpose not related to the exercise of an activity remuneration from within the place visited". George (2013) goes further to indicate that a tourist has to be away from home for longer than 24 hours or he will be defined as an excursionist according to UNWTO. He highlights the following from the above definition. Tourism is about:

- The movement of people;
- Two key elements: the journey to and the stay at the destination;
- The fact that it takes place outside the usual environment;
- The fact that the movement to destinations is short-term and temporary; and
- The fact that destinations are visited for purposes other than taking up permanent residence or employment.

Tourism is critical to African economy and for funding conservation on the continent (Space for Giants and Conservation Capital, 2019) and according to UNWTO (2014) eighty percent of these tourists will be visiting Africa to watch wildlife.

2.5.2 The economic value of nature-based tourism

The African Union commissioned a study for the optimum use of wildlife to support their economies, and this study was conducted by Space for Giants and Conservation Capital and supported by the United Nations Environmental Program (UNEP). The economic value of nature-based tourism for Africa is substantial. In Africa, tourism supports 24 million people with employment and drives 8.5% of Africa's economy and is growing. By 2030 the number of tourists in Africa is projected to jump from 62 million to 134 million people (Space for Giants and Conservation Capital, 2019). Africa's 8400 protected areas are generating 48 billion USD in direct in-country expenditure.

Nature-based tourism not only provides a significant economic benefit and jobs for Africa, but it also provides good employment. Wildlife tourism employs locals in rural areas where it is needed the most; It provides 40% more full-time jobs than the same investment in agriculture; It has double the job creation power of other key industries; and it provides significant employment to women (Space for Giants and Conservation Capital, 2019). According to Dr Lauren Evans, "Africa's unique diversity of wildlife and habitat has the potential to transform the continent's economy radically. At present few State Protected Areas are meeting their potential as engines for growth, presenting a major opportunity for governments. Cared for and sustainably developed,

these are national assets that can provide significant financial and social returns now and long into the future" (Evans cited in Buys, 2019: para 3).

Nature-based tourism is very hard to define due to its broad nature. Fredman et al. (2009:24–25) proposes that a minimalistic definition "Nature-based tourism is human activities occurring when visiting nature areas outside the person's ordinary neighbourhood" (Cited in Fredman and Tyrväinen, 2010:181) may suit the broad nature of the category. The next section provides an indication of how nature-based tourism relate to more commonly used terms such as wildlife tourism.

2.5.3 Wildlife tourism

Seven percent of globaly travel is attributed to wildlife tourism (UNWTO cited in Scanlon, 2017) and market size has been estimated at 12 million trips annually and growing between 3 and 10% a year (CBI, *n.d.*; UNWTO, 2014). As wildlife watching tourism and wildlife tourism is used interchangeably it is important to note that these reports specify figures that uses the UNEP/CMS defininition of wildlife watching tourism "Wildlife watching tourism is a type of tourism that is organized and undertaken in order to watch or encounter wildlife. Wildlife watching tourism exclusively relates to nonconsumptive forms of wildlife-based activities as observing and sometimes touching or feeding of animals, in contrast to consumptive forms like hunting and fishing" (UNEP/CMS, 2006:10) which excludes consumptive tourism.

According to Els and van der Merwe (2016) game farm tourism in South Africa forms part of sustainable wildlife tourism. They further assert that wildlife tourism plays a significant role in conservation, that is showing good growth and potential for economic improvement. Southern Africa notably Botswana, Namibia and South Africa have developed successful private business models based on wildlife tourism which funds substantial conservation efforts (Buckley, 2010). Wildlife tourism can include unguided animal experience by travellers travelling on their own, attractions at fixed locations with accommodation as well as tours (Higginbottom, 2004).

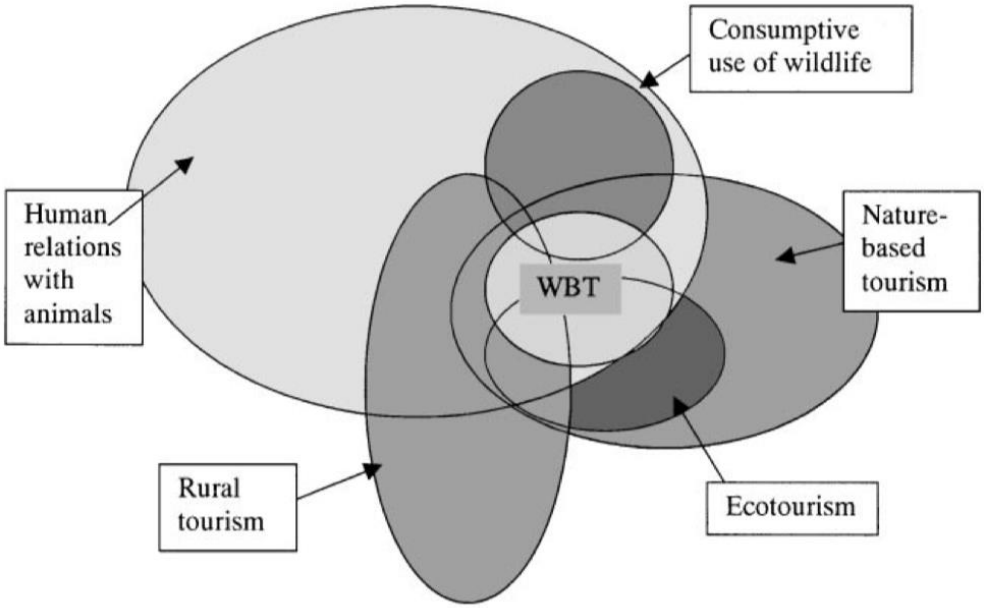

Figure 2.11: Wildlife-based Tourism

Source: Reynolds and Braithwaite (2000:32)

Other research areas overlap wildlife tourism of which human relations with animals; rural tourism; nature-based tourism; consumptive use of wildlife and ecotourism (Reynolds and Braithwaite, 2000). Reynolds and Braithwaite (2000) portray their conceptual placement of wildlife tourism in the diagram presented in Figure 2.11.

Higginbottom (2004:2) defines wildlife tourism as follow “Tourism based on encounters with non-domesticated animals. These encounters can occur in either the animals’ natural environment or in captivity. It includes activities historically classified as ‘non-consumptive’, such as viewing, photography and feeding, as well as ‘consumptive’ those that involve killing or capturing animals, particularly hunting and recreational fishing." Although this definition includes a large part of the conservation areas studied it does exclude some conservation areas that are not explicitly focussed on animals but plant species. The definition also includes captive animals which have limited applicability to the study as zoo’s would not be classed as conservation. Captive animals were present in a wildlife centre for rescued animals on one of the conservation areas studied as well as an enclosure for confiscated lions from illegal breeders.

Due to the broad nature of wildlife tourism and it’s inclusion of consumptive and non consumptive tourism researchers have found it necessary to further specify their areas of study such as the wildlife watching tourism (UNEP/CMS, 2006). The next section focusses on defining the term ecotourism and its uses.

2.5.4 Ecotourism

Ecotourism as a definition challenges through its narrowly defined definition that exclude large section of nature based tourism. Van der Merwe and Saayman (2005) concluded that 56% of game farms which form a large part of South Africa's conservation lanscape converted from stock/cattle farms and 64% have been managed as game farms with little training or education in tourism. According to the International Ecotourism Society (TIES), ecotourism can be defined as "responsible travel to natural areas that conserves the environment, sustains the well-being of the local people and involves interpretation and education" (TIES, 2015: para 1). According to TIES (2015: para 2), the principles of ecotourism is to:

- Minimise physical, social, behavioural, and psychological impacts;
- Build environmental and cultural awareness and respect;
- Provide positive experiences for both visitors and hosts;
- Provide direct financial benefits for conservation;
- Generate financial benefits for both local people and private industry;
- Deliver memorable interpretative experiences to visitors that help raise sensitivity to host countries' political, environmental, and social climates;
- Design, construct and operate low-impact facilities; and
- Recognise the rights and spiritual beliefs of the Indigenous People in your community and work in partnership with them to create empowerment.

Although one of the conservation areas interviewed for this study is a published member of TIES, the principles and objectives may exclude some of the conservation areas studied. The majority of the research conducted in the ecotourism literature focus on the natural attractions, the measures to reduce the impact on the environment, the involvement of the local communities and the role of interpretation. The literature does not calculate and discuss the contribution of tourism to conservation (Buckley, 2010).

Reynolds and Braithwaite (2000) provide a representation of the complexity of the overlaps in the industry roles and classifications by researchers. This study mostly refers to the term conservation tourism and relates it to the conservation tourism industry. The next section defines conservation tourism, as presented in this study.

2.5.5 Defining conservation tourism

The study addresses the strategic management of conservation areas to improve management decision making in the key areas (with the aim to ensure the financial sustainability of conservation areas). Conservation tourism, as an area of study, has not been well established and is in its infancy. According to Buckley (2010), his book titled “Conservation Tourism” is the first book published addressing this vital study area. Conservation tourism, not unlike nature-based tourism, wildlife tourism, and ecotourism also overlap these other classifications (Ballantyne, Packer and Hughes, 2009; Cousins, Evans and Sadler, 2009).

Cousins, Evans and Sadler (2009) propose that conservation tourism is a subsector of ecotourism and that ecotourism is a fusion of ecotourism and volunteer tourism (Cousins, 2007; Cousins, Evans and Sadler, 2009). Conservation tourism is a fusion of ecotourism and volunteer tourism as proposed by Cousins (2007), even referring to the tourists as conservation volunteers (Cousins, Evans and Sadler, 2009) provides a much narrower view of conservation tourism than Buckley (2010). Buckley (2010:2) indicates that conservation tourism is more narrowly defined than ecotourism of which it is a contributing criterion. Buckley’s definition as adopted by this study defines conservation tourism as “Commercial tourism which makes an ecologically significant net positive contribution to the effective conservation of biological diversity.”

Although conservation tourism is in it’s infancy it is not without criticism. Poudel and Nyaupane (2014) state that conservation tourism is an oxymoron as it aims to combine two ambiguous goals conservation of biodiversity and tourism development. Evidence, however, shows that conservation and tourism can form a symbiotic relationship (Ballantyne, Packer and Hughes, 2009). This study provides support for such a viewpoint, that conservation tourism, and by extension, the conservation tourism industry provides a net positive contribution to biological diversity (Buckley, 2010).

2.5.6 Framing the conservation tourism industry

This study will utilise the broad definition adapted from Buckley (2010:2) ‘Industry comprising commercial tourism activities which makes an ecologically significant net positive contribution to the effective conservation of biological diversity’ to define the conservation tourism industry. Purely expanding the concept of conservation tourism as proposed by Buckley (2010) to a concept of a conservation tourism industry may however provide complications.

In South Africa, the conservation industry has complex overlaps as can be noticed by the Standard Industry Classification (SIC) codes that are included namely 11510 Game breading, 11520 Hunting and Trapping, 96333 Game parks and reserves, 96334 Activities of conservation

bodies, 96335 Wildlife conservation. Safari providers and guides fall outside the conservation services within tourism and travel services SIC 71222, 71223,99049 (DTI, *n.d.*). In the United States North American Industry Classification System (NAICS) industry classification it is classified as Nature Parks and Other Similar Institutions – NAICS number 712190 (NAICS, *n.d.*).

York (2016:17) provides a framework called the four pillars of game ranching that may assist in categorising these industries; it includes the breeding of rare and endangered game; hunting (trophy and biltong); ecotourism and wildlife tourism; as well as processed game meat products. Bundling these four pillars, the conservation activities and their relevant SIC codes into a symbiotic whole and calling it the conservation tourism industry to enable the measurement of the net positive contribution may provide opportunities for further study.

For this study Bucley's adapted broad definition has been adopted to define the conservation tourism industry. Managing for expansion, sustainability, as well as conservation, introduces significant complexity, it is impossible to grasp all the variables that will impact the conservation tourism business, let alone manage them. Strategy frameworks have been developed over time to help managers make sense of the complexity which will be covered next.

2.6 Strategy

Porter (1980:3) proposes that "The essence of formulating strategy is relating a company to its environment." To help organisations deal with the complexity of the external environment management various frameworks have evolved. The study aims to understand how strategic management can be utilised to optimise conservation area management in a complex environment.

2.6.1 Defining strategy

Strategy finds its roots in military strategy, with the word originating from the Greek 'stratēgia' which can be loosely translated as the art of the general some more directly translated terms include "office of general, command, being the chief general of Greece, of naval command, the period of command, campaign, troops commanded by one general, generalship" (Liddell and Scott, *n.d.*: para 1). Looking at the early definitions it is interesting to note that conservation at its roots and even today has a direct link to the military in South Africa with Major James Stevenson-Hamilton appointed as the first warden of the Sabi Nature (Today Kruger Park) Reserve partly due to him being a military man his objective to stop hunting in the area. According to Rumelt (2011) in 1966 only three books on strategy existed in the management field, today it fills libraries and has the likeliness to pop culture. He asserts that the massive body of knowledge has not brought clarity.

The Cambridge online dictionary has multiple definitions of the word Strategy listed. It lists three definitions of strategy firstly the UK English definition “a detailed plan for achieving success in situations such as war, politics, business, industry, or sport, or the skill of planning for such situations” this definition outlines the applications and describe it as a detailed plan to achieve success. The American version of the definition “a long-range plan for achieving something or reaching a goal, or the skill of making such plans” highlights the fact that it is a long-range plan and adds the goal element, both of these definitions include the strategic skill as part of the definition. The Cambridge business dictionary describes it as “the way in which a business, government, or other organisation carefully plans its actions over a period of time to improve its position and achieve what it wants” and adds the positioning element and achievement is linked to the “want” of the organisation (Cambridge Dictionary, *n.d.* c).

Further definitions can be found in the business literature, just by looking at the few presented in the next section, strategy as a subject is approached very differently by different schools of thought.

2.6.2 Different strategy perspectives

According to Michael Porter (1996:6) in his article ‘What is Strategy’ he defines strategy according to his positioning viewpoint “Competitive strategy is about being different. It means deliberately choosing a different set of activities to deliver a unique mix of value.” Where Porters definition is deliberate action-oriented so is Rumelt with a focus on specific action rather than positioning, according to Rumelt (2011:6) "the term ‘strategy' should mean a cohesive response to a significant challenge. Unlike a stand-alone decision or goal, a strategy is a coherent set of analysis, concepts, policies, arguments, and actions that respond to a high stakes challenge.” Other schools of thought have a more emergent approach "strategy is not so much about the act of navigation as it is about a process of wayfinding. We only know as we go” (Chia and Holt, 2009:xi).

2.6.2.1 The 5P’s of strategy

Henry Mintzberg (1987) in his search for a definition of strategy opted to provide five definitions he entitled the 5P's of Strategy:

- ‘**Strategy as a plan’** (Mintzberg, 1987). Strategy according to this definition has a course of action or strategic direction that for example include a vision and mission. In the IUCN Managing Protected Areas, Graeme and Worboys propose just such a strategic planning approach that includes a business plan to decide on commercial activities (IUCN, 2015).

- '**Strategy as a Ploy'** (Mintzberg, 1987). Mintzberg indicates that a plan can include a ploy. Rumelt's definition of strategy 'strategy as a cohesive response to a challenge' can be placed in this category. Rumelt uses the example military flanking moves to get a competitive edge as an explanation to describe good strategy (Rumelt 2011).

- '**Strategy as a position'** (Mintzberg, 1987). Strategic positioning attempts to achieve sustainable competitive advantage by preserving what is distinctive about a company. It means performing different activities from rivals or performing similar activities in different ways (Porter, 1996). According to the Harvard Business Review in the article titled "What is Strategy" by Michael E Porter three fundamental principles underlie strategic positioning (Porter, 1996):

    1. A strategy is the creation of a unique and valuable position, involving a different set of activities.

    2. Strategy requires the making of trade-offs in competing - to choose what not to do.

    3. The strategy involves creating a "fit" in a company's activities.

- '**Strategy as a pattern'** (Mintzberg, 1987). Mintzberg note intended strategy is a deliberate strategy that also combines with an emergent strategy to merge into a realised strategy. Part of the original planning of the strategy does not realise resulting in the unrealised strategy. These patterns emerge immerge over time, some without management intervention. Chia and Holt note that much of what we class as a successful strategy today is purely noting these emergent patterns (strategies) rather than the actual deliberate planning (Chia and Holt, 2009).

- '**Strategy as a perspective'** (Mintzberg, 1987). A strategy is in the perspective of the entrepreneur or management, a vision or view of the world. Mintzberg also notes that this perspective is shared in the collective mind of the organisation creating a driving force such as the development of new technology.

Further to the Five P's of Strategy, Mintzberg and Lampet (1999) went on to describe the ten school so of strategy.

2.6.2.2 The Ten Schools

Mintzberg and Lampet (1999) described strategy as the elephant represented in the ancient blind man's tale. They assert that in our search for clarity we are all grabbing a part of the elephant. They liken strategy consultants to big game hunters out there for tusks and trophies and

academics and photo safari enthusiasts keeping our distance from the elephants we pretend to observe. They identify ten different schools that have emerged over the years:

1. **The design school**. Focusses on the link of the internal and external world through the internal strengths and weaknesses and external threat and opportunities (SWOT analysis) and conceive strategies from it.

2. **The planning school**. Developing strategic plans through a series of formal steps and checklists.

3. **The positioning school**. The school focusses on analysing the environment and the firm and develop a strategy to create a competitive advantage for the firm.

4. **The entrepreneurial school**. The leader has a strong influence on the direction the firm takes and its strategy, highly focused on the leader's vision.

5. **The cognitive school**. The school studies strategy is a cognitive process and how it develops in the minds of strategists.

6. **The learning school**. Strategies are emergent, and we learn to adapt as we go.

7. **The power school**. The school sees strategy as a negotiated outcome including power plays and political nuances.

8. **The cultural school**. A focus on the culture and social aspects of the firm rather than major direction shifts.

9. **The environmental school**. The environment is central to the strategy, and the company needs to navigate through change.

10. **The configuration school**. Strategy as a transformation from one approach to the other depending on the situation (Mintzberg and Lampet, 1999).

These ten schools of strategy can be classed as either prescriptive or descriptive.

2.6.2.3 Prescriptive vs descriptive

Divided into two main categories, the design; planning; and positioning school are classed as prescriptive, and the others are classed as descriptive — the prescriptive school focus on how strategy "ought to be" formulated. It asserts that planning is rational and the management of the organisation sets the direction.

The descriptive schools focus on “how things are” and asserts strategy is dependent on those shaping it and its environment and develops over time rather than from prescription (Mintzberg and Lampet, 1999). This study aims to identify which approach is more prevalent in the conservation tourism business. The development of a strategic management framework, which is the objective of this study, in itself proposes that this study lends itself to a more prescriptive approach. A strategy also exists at different levels, corporate, business or functional.

2.6.2.4 Corporate vs business strategy

Corporate strategy focusses on decisions like diversification, vertical integration, acquisitions and new ventures and is typically made at the corporate level. Corporate level strategy focusses on what businesses the corporation should invest in and how broad the or narrow the level of diversification should be.

Business strategy is concerned with how the firm competes within a particular industry or market (Grant, 1998). Rather than looking at the corporation as a portfolio business strategy deals with the strategic management of a firm to achieve a competitive advantage in its environment. In this study, a specific focus will be given to business-level strategy. Strategy at a functional level describes those decisions about a specific functional department, for example, marketing strategy.

The strategy concepts covered so far can be classed as a deliberate strategy. Some strategies, however, emerge, rather than being from a specifically designed plan.

2.6.2.5 Deliberate vs emergent strategy

Strategy historically, specifically those from the prescriptive schools, focus on developing plans for the future. This study aims to develop just such a framework for strategic planning applied to the conservation tourism industry. Mintzberg (1987) describes these strategic plans as intended strategies, only some of which are realised as depicted in Figure 2.12.

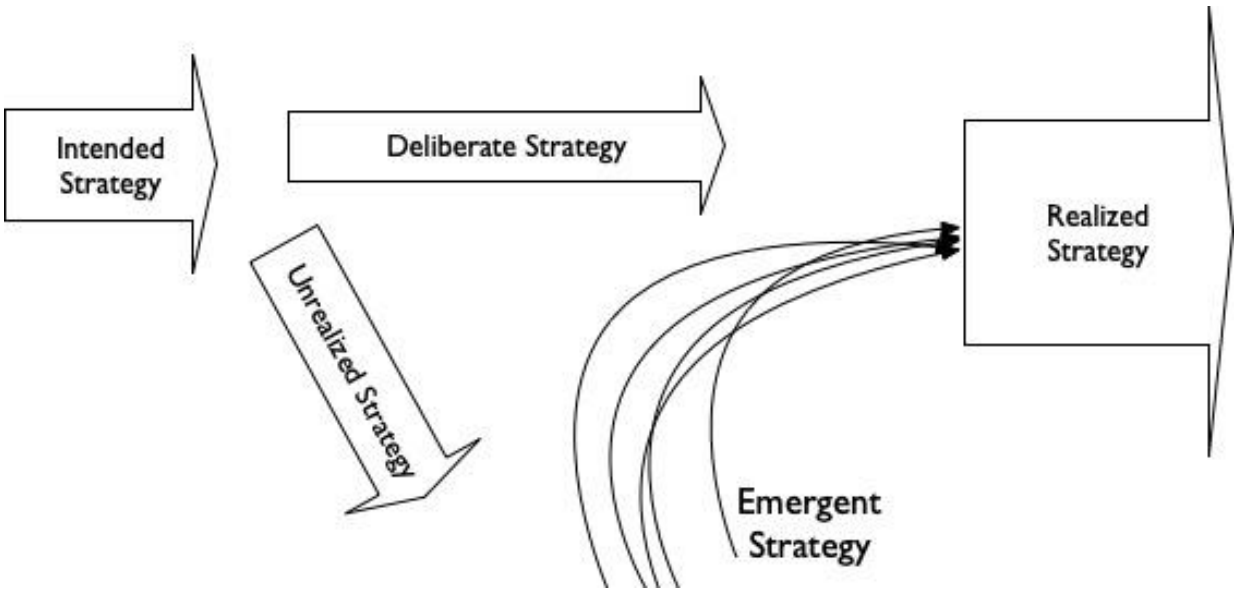

Figure 2.12: Deliberate and Emergent Strategy

Source: Adapted from Mintzberg (1987)

Strategic planning is conducted *a priori* and management has limited foresight to what the future holds. Because these deliberate strategies are developed with limited knowledge of the future, some do not realise – unrealised strategy. While dealing with day to day business pressures some strategy emerges, companies develop new ways to deal with competitive threats; develop new products to target specific sectors; and get into markets not intended due to demand, these are emergent strategies. According to Chia and Holt (2009), much of what we call strategy today can be explained *a posteriori* and are emergent strategies.

Different perspectives and schools of thought in strategic management have emerged over the years. Some specific frameworks have emerged that incorporate these schools of thought.

2.6.3 The macro-environment: PESTLE

The PESTLE framework evolved to broadly categorise the external environment in a mnemonic with six macro-environmental categories, political, economic, social, technological, environmental and legal variables (PESTLE) (Witcher and Chau, 2014). The PESTLE is not a framework in the true sense but has evolved to aid in the identification of macro-environmental variables that affect businesses. The PESTLE has been utilised in different forms for example PESTE which excludes the legal variables and include them in the other variables (Lazenby, 2018).

Political include the governmental variables and political stability in the country and its opportunities and threats to the business. Economics highlight the economic variables in the businesses host country and its effect on the business results. Social variables include

demographics and other variables that affect society as a whole, local and international. Technology includes technological advancement and its impact on business. Legal highlight the effect that a change in the legal framework can impact on the future business results. Finally, environmental ads environmental considerations such as climate change and the long term considerations businesses have to consider.

Macro environmental variables as highlighted in the PESTLE framework provides a broad understanding of what external variables affect businesses. Industry variables are also critical to the business and the Fiver Forces Model has been developed to highlight the main forces and their impact on business results.

2.6.4 Industry and Porter’s five forces

Funding for conservation expansion is reliant on various industries. The choice of industry is critical to developing a sustainable business model for the conservation area. Michael Porter's research later confirmed by McGahan and Porter’s (1997) research indicated that one of the most critical decisions in determining a business's profitability is the choice of industry and in fact, can account for up to 36% the variance in profitability. To analyse the attractiveness of these industries Porter (1979) developed the five forces model depicted in Figure 2.13 which indicates that the five major forces that determine an industries attractiveness are: the threat of new entrants; the threat of substitutes; buyer power; supplier power; and rivalry among existing firms.

Figure 2.13: The five forces that shape industry competition

Source: Porter (2008:27)

The threat of new entrants can be determined by looking at the barriers to entry, market shares and the industry growth rate. Various barriers to entry exist in industries including economies of scale; product differentiation; capital requirements; switching cost of buyers; access to distribution channels; other cost advantages; government policies. The lower the barriers to entry the higher the threat of new entry and ultimately profitability over the long term (Porter, 2008).

The threat of substitute products and services is affected by the relative price of the substitute, the relative quality of the substitute and the switching cost to buyers (Porter, 2008).

Determinants to bargaining power of suppliers include supplier concentration; availability of substitute inputs; the importance of supplier inputs to the buyer; suppliers product differentiation; the importance of the industry to suppliers; buyers switching cost to other inputs; suppliers threat to forward integration; and buyers threat to backward integration (Porter, 2008).

Determinants of bargaining power of buyers include number of buyers relative to sellers; product differentiation; switching cost and use of other products; buyers profit margins; buyers use of multiple sources; buyers threat of backward integration; sellers threat to forward integration; the importance of the product to the buyer; and buyers volume (Porter, 2008).

The rivalry among existing competitors is affected by the number of competitors; relative size of the competitors; industry growth rate; fixed cost vs variable cost; product differentiation; capacity augmented in large increments; buyers switching cost; diversity of competitors; exit barriers; and strategic stakes (Porter, 2008).

The Porter's five forces model has attracted criticism in that the resource-based view provides a better way to develop a business strategy (Prahalad and Hamel, 1990; Rumelt, 1991), complementors are ignored (Ghemawat, 1991), intermediaries and the power of internet technology is not taken into account (Andriotis and Ανδριώτης, 2004; Karagiannopoulos, Georgopoulos and Nikolopoulos, 2005). The Five Forces Framework has revolutionised the way businesses look at the competition and competitive forces, but it is essential to understand it has limitations. The framework's applicability has to be investigated for the conservation and tourism industry.

2.6.4.1 Five forces in tourism

Some industry-specific competitive strategy research of limited scope has been conducted. Andriotis and Ανδριώτης (2004) did a theoretical analysis of Porter's five forces model for the Greek tourism market. The aim was to test the relevance of the framework for the tourism market. The paper concluded that the framework does not adequately include all variables that affect the tourism market.

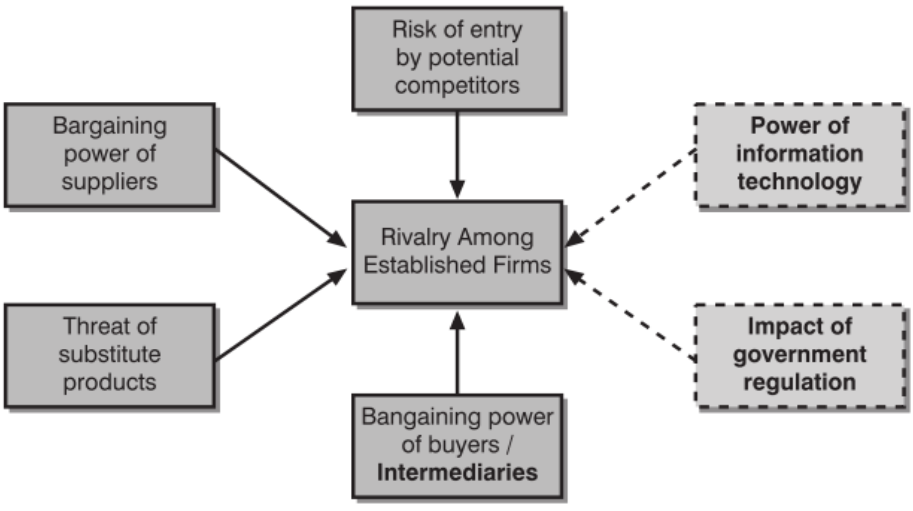

Figure 2.14: Porter's five forces adapted

Source: Andriotis and Ανδριώτης (2004:136)

He proposed to include two extra variables including the power of information technology and the impact of government regulation as indicated in Figure 2.14. They also added intermediaries to

the bargaining power of buyers as they are a big influencer in the tourism industry (Andriotis and Ανδριώτης, 2004). The influence of intermediaries, such as online booking platforms and social media, has altered the tourism industry and provide opportunities to access international markets (Elliott and Boshoff, 2007). It is critical to understand their role in the South African conservation tourism sector.

Michael Porter (2008) in his five competitive forces that shape strategy indicated that the government is not best understood as a sixth force as it is not inherently good or bad for industry profitability. The best way to analyse how government policy shapes the industry is to understand how it affects the five forces. He also indicates technology does not make an industry attractive per se or not some of the most technologically advanced industries are not very profitable. The research will aim to understand what forces affect the conservation tourism industry and propose a new framework to assist in positioning the conservation tourism entity.

The significant forces described by the five forces is mainly from the perspective of threat or competition. As in the biological sciences further to competition, there is also cooperative relationships.

2.6.5 Competition vs cooperation

By only providing competitive forces as outlined in the five forces model, a significant occurrence noticed in nature, cooperation and symbiosis are ignored. Brandenburger and Nalebuff (1996) in their book Co-opetition provided the value net framework, which included complementors along with the company, customers, competitors, and suppliers. Complementors are proposed as the mirror image of competitors and increase buyers willingness to pay and/or reduce what suppliers require as an input (Ghemawat, 1991). In the conservation tourism industry, this is a critical concept as, without flights to South Africa, the inbound conservation tourism industry will not be as attractive. The airline industry can thus be seen as complementary to the conservation tourism industry.

Cooperation is not only limited to complementary industries or firms, but evidence has been provided for cooperative relationships between competitor companies. Four primary relationship types have been identified between rival firms, including co-existence, competition, co-opetition, and cooperation. It has been identified that relationships between competitive firms are quite complex and could include cooperative and competitive arrangements at the same time. Similar to symbiosis in nature, competitors for resources can have particular needs met by cooperating with rival firms (Bengtsson and Kock, 1999). For example, in the conservation tourism industry,

private resort operators holding concessions in the Kruger National Park compete with SANParks but also have a cooperative relationship.

Cooperation in in the conservation business as in life and nature is key to survival. Looking at a firm from a pure industry perspective will ignore the important aspects of the resource endowments of the firm and their effect on the success of the conservation tourism business.

2.6.6 Resource-based views

The resource-based view is not a new concept, Barney and Arikan (2008) identified early resource influences from Ricardian economics. According to Barney and Arikan, Ricardo (1817) was interested in “original, unaugmentable, and indestructible gifts of Nature.” The demand and supply economics studied over the next century also provided a clear indication of the resource views, prevalent during the period. The role of the manager in business success has also been a key indicator of resource importance and has been well studied. In 1991 Rumelt published a paper "how much does industry matter" in which he showed that firm-level effects have more influence on performance than industry (Rumelt, 1991). This was later challenged by McGahan and Porter (1997) showing industry effects are more substantial by broadening the industry scope. Besides the argument on which has more influence on business success, the importance of strategically managing resources for the success of the firm is paramount and comes through very strongly in this study.

A clear link can be identified between resource theory, including the early work of Ricardo and the success of conservation tourist areas reliant on the ‘gifts of nature'. Firms that develop or acquire scarce or valuable resources can at least create temporary or persistent competitive advantage. Companies that continue to use these scarce or valuable resources to create strategies other cannot anticipate, can create superior performance temporarily or over the long-term (Barney and Arikan, 2008). Although some wins on the percentage of land classed as protected areas have shown some promise, the global impact of the human population growth and the expansion of required land to feed and house us, truly natural land under conservation is experiencing increased scarcity. These scarce resources can be tangible and intangible, intangible resources such as skills and reputation are relatively immobile (Porter, 1991).

Prahalad and Hamel (1990) identified that more successful companies focus on ‘core competencies’ rather than multiple businesses repeated across industries. Core products in these firms are developed from core competencies rather than just focussing businesses on a specific unrelated product. They indicate “Core competencies are the collective learning in the organisation, especially how to coordinate diverse production skills and integrate multiple streams

of technologies" (Prahalad and Hamel, 1990: 81). Three tests can be utilised to identify core competencies: they provide access to a wide variety of markets; make a significant contribution to how the customer perceives the benefits of the product; should be difficult for competitors to imitate. Porter (1991), however, asserts that resource-based view cannot be an alternative view of strategy, the resources of the company must complement not a substitute for the market positioning.

Porter (1991) proposes a link between activities and resources. He asserts the reputation of the firm which is a resource is developed over time through activities and assets deteriorate over time if not for activities. Companies also accumulate resources through activities which determine that activities and resources are 'duals' of each other. Learning and R&D activities determine the skills resource over time. Porter thus asserts that resources are intermediate between activities and competitive advantage. What is clear is that much of today's accounting measure the resources of the firm to determine performance.

Strategic management needs to take cognisance of both activities and resources in their planning. It is important to understand that strategy can be viewed from an outside-in or inside-out perspective.

2.6.7 Outside-in vs inside-out

Strategic management and planning provide an integrating process to bind the different facets of the protected area together. It is the role of the strategic management process to develop strategic options and choices (Ungerer, Ungerer and Herholdt, 2016). These strategic options and choices include the internal environment of the organisation which in this case includes conservation as well as the tourism or other financing activities; it includes strategic resources of the conservation area as well as tourism; similarly, the core competencies and dynamic capabilities will include both parts of the conservation or protected area entity. The entire organisation has an interaction with the outside environment. To enable the organisation to create a sustainable competitive advantage it is critical to align all functions strategically.

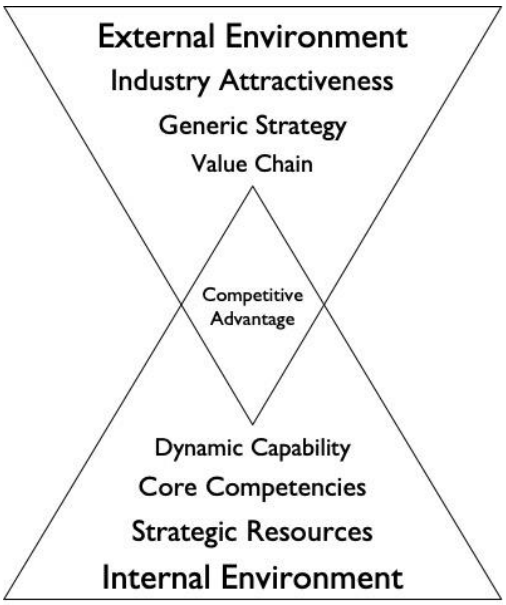

Figure 2.15: Outside-in and inside-out influences on strategy

Source: Witcher and Chau (2014)

Witcher and Chau (2014) provide the depiction Figure 2.15 on how strategy links the firm and its resources and competencies identified in the previous section with the external environment and where the strategic concepts fit in this link. The external environment has an impact on the firm and the industry. According to Porter (1985:12), the firm can only choose one of three generic strategies to position itself in the market. The firm can focus on a cost advantage by providing the same product at lower prices, or it can differentiate itself from other firms by choosing a differentiation strategy. Alternatively, the firm can choose a focus strategy which is a combination of the two targeted at markets or segments. Michael Porter (1991) proposes the 'Value chain' as the way the company generate value through various activities linking it to the external environment through inbound and outbound logistics.

The benefits of a strategic alignment include: problems related to integration are prevented; improved decision making by including the entire group of employees; delivering better outputs to the tourist; communication is improved across all functions; gaps and overlaps of activities are reduced; resistance to change is reduced; commitment is improved; management is enabled to develop strategic foresight and create direction for the conservation or protected area (adapted from Lazenby 2018). The traditional artificial boundaries between conservation and commercial activities can be softened and operational effectiveness improved through their integration in a strategic plan. It is crucial to understand tourism and the application of the strategy in the field.

Dealing with environmental issues have been depicted as complex, the business environment is a further example of such a complex environment. Strategic management interacts with this complexity by planning for environmental, social and economic variables.

2.6.8 Complexity and strategic management

Michael Porters (1979, 1985) as well, as the resources perspectives, approaches do not readily align with the complexity world view. Developments in the field of complexity recognise that equilibrium in the classical view does not exist to sustain advantage. Firms need to continually develop short-lived advantages. Accepting complexity requires an understanding of how environmental changes in the past have led to particular institutions or structures. Secondly, an organisation need to be able to compete in today's environment, but also have the ability to plan for the future. Finally, it is not likely that generic strategies will be useful in all companies as they need to be unique, in the current and future business landscape (Boulton *et al.*, 2015).

According to Boulton, Allen and Bowman (2015) to be successful, the management team need to make accurate future predictions, but can they? Researchers hypothesised that the different companies and industries external environment could be placed on a complexity scale. Agents (people, companies or other entities) can not foresee *a priori* any courses of action or consequences neither can be accurately forecast (Lane and Maxfield, 1996). Lane and Maxfield (1996) indicate that two types of uncertainty exist, 'time horizon uncertainty' we do not know when things are going to happen and 'knowledge to relevant consequences' we do not know how what and why they will happen or who will do what. They propose a scale from stable to complex environments in which organisations operate, and that it is more relevant to manage with complexity in mind in the latter.

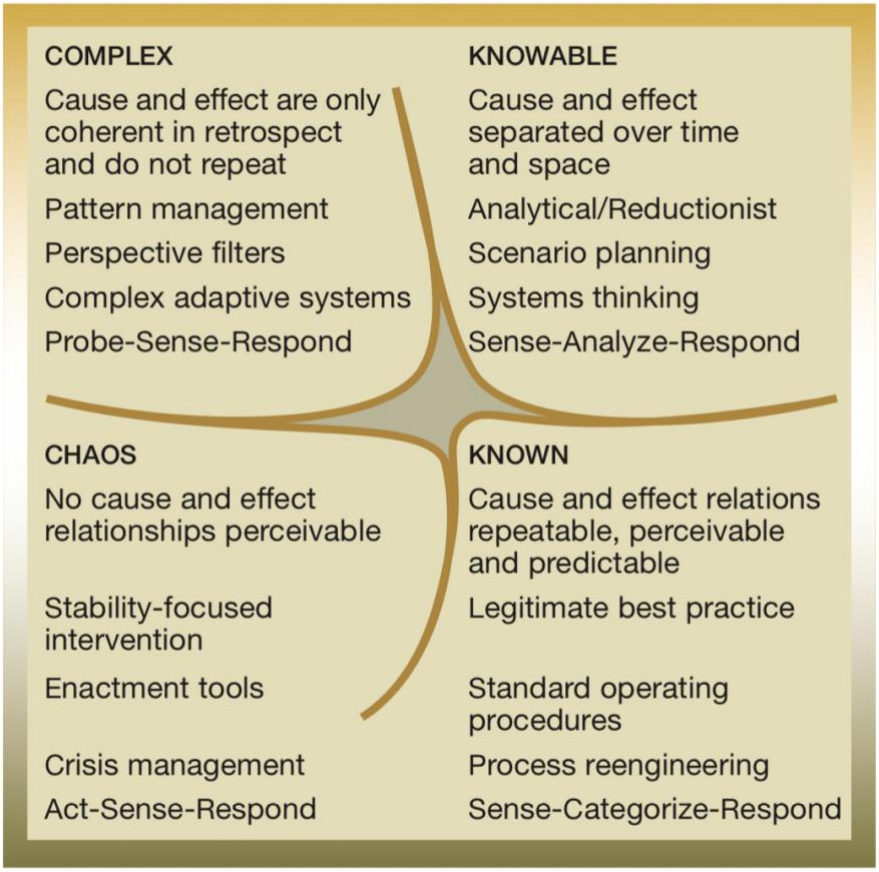

Figure 2.16: The Cynefin Framework

Source: Kurtz and Snowden (2003:468)

Kurtz and Snowden (2003) go further in their Cynefin Framework to provide guidelines for strategic foresight and the tools that can be utilised in their respective quadrants. They propose a sense-analyse-response decision model to understand knowable strategic foresights (known-unknowns). The tools proposed for these futures include scenario planning and systems thinking. For complex systems or complex adaptive systems, Kurtz and Snowden propose probe-sense-respond decision making. They propose to make sense of patterns to get a broad view, and that narrative techniques work well in this space.

Mason researched in South Africa to understand the validity of such a hypothesis, which concluded that it was not the case. Mason conducted a qualitative study comparing successful firms and less successful firms to understand if organic, adaptive strategies are more successful in turbulent environments and traditional formal strategic management strategies work better for stable environments. The study results indicated that using a more adaptive, organic strategic approach correlate with successful companies but the companies classed in stable environments did not correlate with traditional strategic management. Organic, adaptive management yielded

high results in stable markets too. Mason (2007) noted that this might be due to the South African market being unstable as a whole.

The World Economic Forum (WEF) with their strategic foresight team has developed a system for dealing with uncertainty through three main tools: scenarios; systems thinking; and mapping and challenging paradigms and mental models (Ungerer, Ungerer and Herholdt, 2016). The tools they utilise address the top half of the Cynefin Framework, the complex and knowable areas. WEF highlight three reasons why these tools are useful to the WEF: There is little agreement among stakeholders about the nature of issues; no one is 'in charge' of the issue, and traditional thinking about an issue is outmoded (Ungerer, Ungerer and Herholdt, 2016). Hammer, Edwards and Tapinos (2012) also found that using the complex adaptive system improves top management's decision making during the strategy development phase.

Three main aspects of the Complex Adaptive Systems lens provide this advantage: the strong people variables; pattern development; and continuous varying interactions (Hammer, Edwards and Tapinos, 2012). The bottom-up approach and taking people interactions seriously, moving away from a macro perspective, provide support for positive results. How people relate, communicate, power structures and the adjacency is important for emergence (Stacey, Griffin and Shaw, 2000). Foresight development in a complex world is difficult, and managers need to understand their environment, to do this they not only need to understand who the agents that the company interact with are and also identify the artefacts but also foster generative relationships (Lane and Maxfield, 1996).

Fostering generative relationships with stakeholders of the organisation provides an opportunity for emergence. Fostering generative relationships is not easy as persons do not know which relationships will be generative *a priori.* We can, however, focus on the following aspects: Aligned directedness - Lane and Maxfield (1996) propose that firstly agents need to seek alignment and move in a similar direction; Heterogeneity – they have to have different competencies which combined can lead to new competencies; Mutual directedness – they need to have trust and common interest; Permissions – they need permission to interact; Action opportunities – just talking will deliver relationships that last but working together and delivering actions will. These key generative relationships with stakeholders provide opportunities for emergence, enabling the business to identify and deliver on opportunities.

2.6.9 Stakeholder theory

The importance of stakeholders in the management of protected areas in a very complex environment is critical to the success of conservation. The importance and complexity of

stakeholders relationships can be highlighted by the list of stakeholders The World Bank Group identified. These include governments (national, state, regional, local authorities), protected-area, national park, and wildlife refuge administrators/managers, private-sector tourism suppliers and investors, tourism planning and promotion organisations, communities, NGOs and donor agencies, academics and the scientific community, tourists (domestic and international), traditional and religious leaders and other service providers indirectly involved in supporting tourism operations, including guides (Twining-Ward *et al.*, 2018:52).

The process of stakeholder management has proven to be an initiative that takes time and is an ongoing process. Burgoyne and Mearns (2017) conducted a study in the Ololosokwan community adjacent to the Serengeti National Park. The Ololosokwan community is experiencing population growth and resources are required. Stakeholders in the area include, but are not limited to the Ololosokwan community, government at national and local levels, photographic tourism operations, the Tanzanian National Parks organisation, non-governmental organisations, and a hunting outfit called the Ortello Business Corporation (OBC). Even though tourism has provided many opportunities for the community and initiatives such as resource sharing the conflict between stakeholders continue.

Further studies of the Stakeholder Management in the Mnemba Island Marine Conservation Area (MIMCA) by Burgoyne, Kelso and Mearns (2017) also highlighted the complexity of formal stakeholder agreements and highlighted essential variables to facilitate positive stakeholder relationships:

- Transparency of tourism funds collected and utilised and discussion with local communities regarding these funds;
- Open communication between stakeholder groups about their interests;
- Downward accountability of community leaders regarding charitable funds received and tourism;
- Improved community representation in the management;
- Partnerships between tourism operators and charitable institutions to stimulate infrastructure and social development; and
- Local government and NGO assistance to communities for access to alternative livelihoods.

To understand the strategic management of stakeholders we need to look into stakeholder theory. Edward Freeman is often cited as developing Stakeholder theory published as a strategic management approach in 1984, according to Freeman (2010:31) the word "stakeholder" first appeared in management literature at Stanford Research Institute in 1963. Initially, the concept was defined as "those groups without whose support the organisation would cease to exist." According to Freeman (2004), the original list included shareowners, employees, customers, suppliers, lenders and society. The original researchers argued that if managers did not understand the needs of these groups, they would not be able to formulate objectives. Freeman (2004) indicates that the premise of the Stakeholder theory is that strategy is rather a 'useful unit of analysis' for stakeholders than the task of 'formulating, implementing and evaluating' or the idea of 'industry'.

In this article Freeman (2004) summarises stakeholder strategy in 6 main points:

- No matter what your objectives you need to take account of the effects of others on you and your effects on them;
- You need to understand stakeholders behaviours, values, backgrounds and societal context;
- To be successful, we need to know what we stand for;
- We need to understand how stakeholder relations operate at three levels: the rational or whole organisation; the process or procedural level; the transactional or day to day interactions;
- Utilise these ideas to develop new structures, processes and business functions but keep stakeholders in mind; and
- Stakeholder interests need to be balanced over time.

Freeman (2010) proposes a process flow depicted in Figure 2.17, which he indicates has to be tailor-made to the individual needs of the organisation and should not be seen as a tick box approach. The framework highlights six essential steps: 1) stakeholder behaviour analysis; 2) stakeholder behaviour explanation; 3) coalition analysis; 4) generic strategy development; 5) specific programs for stakeholders; 6) integrative strategic programs. Firstly, by analysing the strategic behaviour, we can develop an understanding of the behaviour by theoretically putting the manager in the stakeholder's place to assist in developing the entities strategy. The coalition analysis step is used to look for coalitions between the different stakeholders. The framework also

highlights Freeman's generic strategies which take account of the relative cooperative potential and the relative competitive threat to select between four different generic strategies: changing the rules; offensive; defensive or hold. Specific programs are developed for each of the different stakeholders, which is followed by an integrated plan for the organisation.

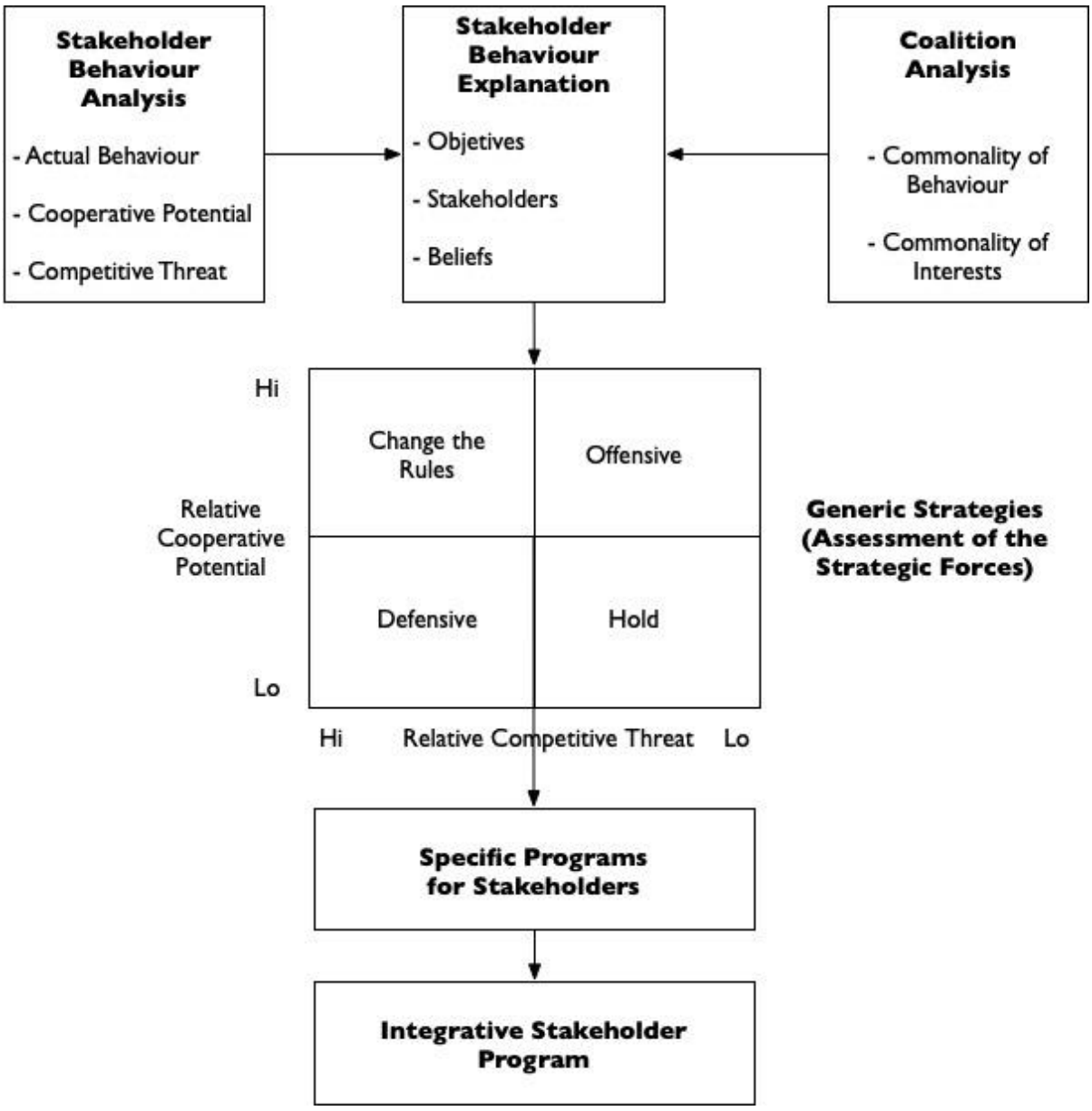

Figure 2.17: Stakeholder strategy formulation process

Source: Adapted from Freeman (2010)

Not all stakeholders have the same weight and importance to the organisation. Freeman provides a stakeholder grid for mapping the importance of stakeholders. The grid incorporates the stake that the stakeholder has where he distinguishes between equity; economic and influencers. Examples of these include directors and shareholders may have an equity stake, customers, suppliers and competitors with an economic stake and government with influencer stake. The

second axis to map the stakeholders include the power the stakeholder has and is represented by formal or voting; economic and political. Examples of stakeholders with formal voting power is again directors, examples of stakeholders with economic power are customers and finally for political power is represented by government and unions (Freeman, 2010).

Systems thinking has been proposed as a tool to deal with general complexity. Systems thinking has, however, also been proposed to support strategic planning and decision making.

2.6.10 Systems thinking and strategic management

Maani (2016:19) proposes that systems thinking can complement strategic management “In particular, strategic planning is about thinking and preparing for the long term. By this virtue, strategic planning needs to integrate disparate areas and activities under a common framework. In this regard, Systems Thinking can be a powerful complement to strategic planning.” Ungerer, Ungerer and Herholdt in their book Crystallising the business landscape: Strategy analysis practices and tools for business leaders and strategy practitioners, proposes systems thinking as one of the solutions for dealing with uncertainty and as a solution for strategic foresight development indicating that the WEF utilises it as part of their selection of tools as indicated above (Ungerer, Ungerer and Herholdt, 2016).

Maani (2016) proposes that differences exist between how strategy has traditionally been approached, as well as systems thinking. He asserts that traditionally, management has conducted strategic management on a three to five-year cycle driven by senior management and planning teams. The typical approach analyses the environment, and develop strategic plans that get communicated to the employees. This analysis utilises historical data to develop forecasts linearly. The plans look at different aspects of the business separately and do not provide any solution for their interactions. The plans assume predictable futures and have a static approach (Maani, 2016). It is clear that Maani's description of Strategy is based on a prescriptive view of strategy as the descriptive proponents have addressed some of these concerns. According to Maani conversely, systems thinking provides a different approach to planning.

Systems thinking is continuous and looks at patterns of behaviour over time in a non-linear approach (Maani, 2016). It has to be noted here that it has been questioned if systems thinking is truly non-linear due to its cause and affect reliance (Stacey, Griffin and Shaw, 2000) and some descriptive strategy schools advocate continuous planning. Maani (2016) proposes that the process should be a participatory planning approach that includes staff and stakeholders rather than the traditional top-down strategy development. However, this approach is not unique to systems thinking and should instead be seen as a planning approach. Systems thinking further

focusses on the interaction of the parts rather than the individual parts. Synthesis rather than analysis is proposed in developing systems models. He proposes that systems analysis allows for multiple futures (scenarios) and emergence (Maani, 2016).

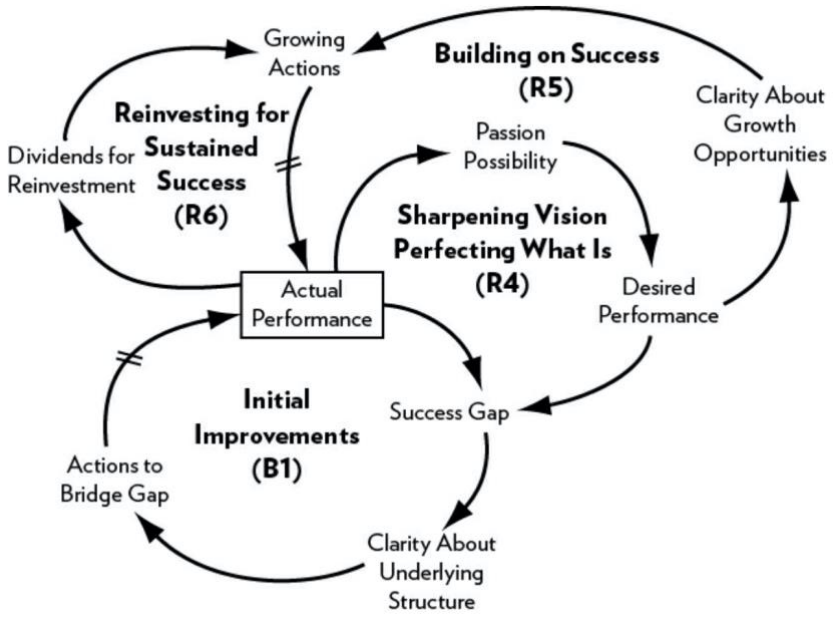

Figure 2.18: Goal achievement theory: reinforcing improvements

Source: Stroh (2015: 2862)

Stroh (2015) provides five reasons to utilise systems thinking for strategic planning. 1) It incorporates dynamic cause and effect relationships with reinforcing and balancing loops. 2) It provides a way to optimise relationships among parts of a system rather than the parts themselves. 3) Shows multiple success variables over time in a logical sequence. 4) Take time delay into account. 5) Takes short term and long term planning into account. The goal achievement CLD presented in Figure 2.18 indicates how in a complex world an iterative approach to continuous improvements is required for continued performance by building on success, reinvesting and sharpening vision.

Strategic management with its focus on the macro environment, industries, resources and stakeholders has been discussed as a generic concept up to this point. It is crucial to understand the strategy concept as it pertains to the conservation areas.

2.7 Strategic management of conservation areas

Planning as a subject is very well studied in protected area management, multiple planning tools and best practice sharing reports are available to the protected area manager. Strategic management and its tools and concepts, on the other hand, have not permeated the protected

area management literature comprehensively. The strategic management literature either focus on strategic conservation management or strategic tourism management, but the two do not seem to meet. The role strategy plays in the organisation include that of alignment and integration between different functions. The split between conservation and tourism strategy highlights that the historical split between conservation objectives and commercial objectives are still well entrenched.

2.7.1 Strategic management of protected areas

Thomas and Middleton in their IUCN Guidelines for Management Planning of Protected Areas discuss the new paradigm for the management of protected areas. Protected area management is evolving to be paid by various sources rather than just relying on the taxpayer. As these protected areas evolve they require managers who do not just understand the conservation of the area but also the funding of such conservation. Thomas and Middleton show the movement for inclusion of social and economic objectives and their importance in the management of the protected area. Protected area management has evolved to utilise the stakeholder approach rather than being a purely government-run institution. (Thomas and Middleton, 2003).

Thomas and Middleton (2003:4) indicate that successful management planning: “is a process, not an event and it includes implementation; concerned with planning for the future and proposes alternate courses of action; provides ways to think about threats and opportunities, it solves problems and promotes discussion; is systematic; includes value judgements; provides a holistic view; is a continuous process.” These guidelines promote a direction-setting; a holistic view and promote discussion which are strategic considerations it would however not guide strategic planning. Worboys and Trzyna (2015) provide strategic management and strategic planning tools for protected areas in the publication. The strategic management framework they provide include guidelines for understanding the operating environment in an unstructured list (Worboys and Trzyna, 2015). The list has some parallels with the latest strategic management thinking but falls short of providing clear direction to the protected area managers. The list contains eight items which we have grouped in four discussion sections.

Macro-environmental variables - "Comprehending the historical, sociocultural, economic and political context; identifying statutory legislation requirements, the needs of the government, board of management determinations and the needs of local communities" (Worboys and Trzyna, 2015:213). Comparing the macro-environmental variables mnemonic PESTLE to the above considerations the list is relatively comprehensive and includes social, political, economic, legal and environmental considerations the list excludes any technical considerations. The list stops

short of including any market environment or industry variables and do not refer to park guests or any commercial activity.

Resources - “Identifying the natural and cultural heritage values to be protected and their significance; assessing threats and the condition and trend in the condition of the natural and cultural heritage resources to be managed; a need to work nationally and internationally and to share and globalise conservation efforts to help achieve biodiversity conservation outcomes” (Worboys and Trzyna, 2015:213). Resources are addressed minimally by looking mainly at the area of conservation. The list excludes human resources, capital equipment or expenditure such as building improvements and development or any other commercial resources.

The operating environment - “Reviewing the internal operating environment and the capacity of the protected area organisation to manage including considerations from all four functions of management; researching and analysing trends in the operating environment” (Worboys and Trzyna, 2015:213). Analysing trends and reviewing the operating environment does seem to provide an overarching catch-all description of the protected areas operating environment. It does however not provide clarity to the protected area manager what to consider in the operating environment nor does it guide the manager implementation.

Reporting - “responding to management effectiveness evaluation of protected areas such as state of the parks reporting, independent audits, government inquiries, parliamentary inquiries and the findings of court hearings” (Worboys and Trzyna, 2015:213). A special mention is provided on responding to various stakeholder enquiries and interactions, but their relevance in strategic management is questionable in the current form.

Worboys and Trzyna (2015) include strategic direction setting by outlining suggested methods to draw up vision and mission statements. The strategic planning section only highlights one tool the SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis. The origin of the SWOT analysis is not known, Wikipedia credits Stanford Professor Albert Humphrey for the development, but according to Helms and Nixon it cannot be confirmed, and the SWOT analysis has also been credited to other academic authors. The SWOT Analysis has become an essential strategic analysis tool since its first use in the '60s and '70s. The ease of use is part of the reason for the broad applicability, this ease of use, however, translates into some limitations which have resulted in the development of more advanced tools for strategic management. The limitations include; vague and simplistic; thoroughness of brainstorming required; Issues with categorisation and classification; no strategic direction provided; and need for quantification (Helms and Nixon, 2010).

The commercial activity of the conservation is included as a suggested business planning exercise utilising the UNESCO 'Business Planning for Natural World Heritage Sites: A toolkit' (UNESCO, 2008). Worboys and Trzyna (2015) outline the reason for doing a business plan and some key inclusions that need to be included in the business plan, not including strategic planning. The UNESCO business planning guidelines do include strategic tools including an Institutional analysis that includes: strategic direction (vision, mission); stakeholder analysis; SWOC (Strengths, Opportunities, Weaknesses, Challenges) analysis. The document includes a market analysis including market definition; PEST Analysis; customer profile; competition; and strategic options (UNESCO, 2008). Although split from the general conservation strategic management this provides a relatively comprehensive list of management tools for protected area managers.

Conservation area management, in many cases, falls within the conservation function of the organisation. Protected area management literature exclude or place protected area tourism management in a separate planning process.

2.7.2 Strategic tourism management

According to Eagles, McCool and Haynes (2002), the decision to keep the planning separate depends on the complexity. The complexity they refer to include specific details of the management practices; facility location; policies and guide tourism operations; and level of fees charged. They indicate that the tourism plan may also include specific plans: visitor activity management process, the tourism optimisation management model; the limits of acceptable change; or a visitor impact management plan. The notion of complexity here should instead be described as complicated. The number of sub-plans and elements in the plan is indeed not a valid reason to not provide a consolidated overall protected area plan. They stop short of providing an integrative strategic plan.

Tourism management developed as a commercial activity and as such many academic institutions offered tourism qualification in the commercial schools. Strategic management has thus developed parallel with strategic management in business and commercial schools. Bresler in "The business environment of the tourism establishment" looks at the Macro and market and microenvironment of the tourism business. The analysis of the tourism industry utilises the Porter's five forces model. The macro-environment utilises the standard business Macro environment and includes a physical environment including geographical features as part of the analysis. The frameworks and models utilised for environmental evaluation can be described as applied strategic management (Bresler, 2008).

De Bruyn and Klopper in their book managing tourism services: a southern African perspective proposes a strategic planning process framework. The framework starts by looking at strategic direction setting through the developing a vision, mission of the tourism organisation, taking the external and internal business environment into account. An external business environment scanning is conducted including: analysing the market environment, competitive environment and other macro-environmental variables as well as an internal environment scan including physical; financial; human and structural elements. According to De Bruyn and Klopper, the SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis provide the link between the external and internal. From the SWOT analysis, it is proposed that the long term objectives and the grand strategy is developed. Objective setting and operating strategy step are then followed by implementation, control and evaluation of the strategy (De Bruyn and Klopper, 2008).

Where tourism strategic tourism management developed along a tourism (commercial) path, strategic frameworks for conservation area management such as adaptive management developed for conservation.

2.7.3 Adaptive management

According to Stankey, Clark and Bormann (2005), adaptive management's origin can be traced to the seminal work of Holling (1978), Walters (1986), and Lee (1993). Adaptive management can be defined as management which incorporates research into conservation action. Specifically, it is the integration of design, management, and monitoring to systematically test assumptions in order to adapt and learn" (Salafsky, Margoluis and Redford, 2001). The manager continually tests assumptions by monitoring adaptations made to the management of the conservation area, adjusting the assumptions or making adaptations to the management program and learning from the process. Salafsky, Margolius and Redford (2001) proposes that several conditions warrant the use of the adaptive management approach: complex systems; unpredictable change; a competitive environment; urgent action required; incomplete information; we can learn and improve. These conditions are very relevant to the strategic management and the complexity of the conservation areas.

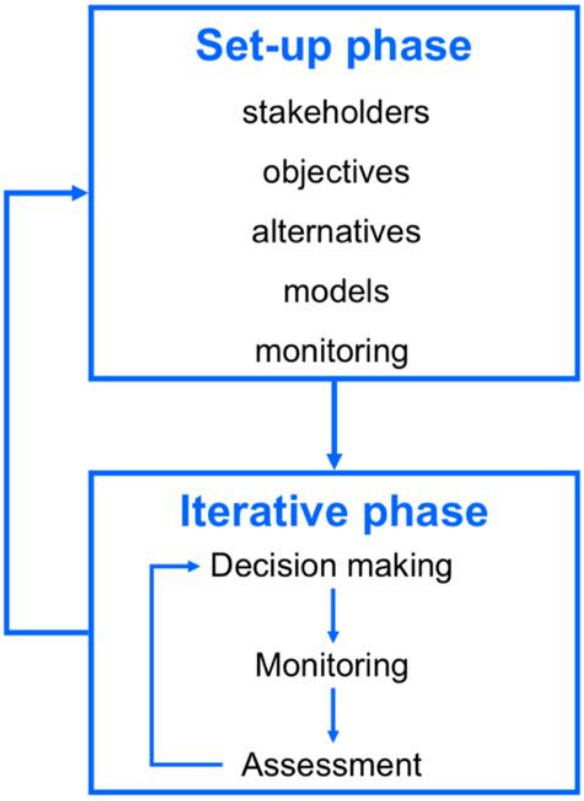

Figure 2.19: Two phase learning in adaptive management

Source: Williams, Szaro and Shapiro (2009)

Various models of adaptive management exist, however, the depiction of the set-up phase and the iterative phase of the adaptive management process as proposed by Williams, Szaro and Shapiro (2009) presented in Figure 2.19 provides an outline of how the strategic or planning phase could exist within the set-up or planning phase. This includes:

- **Stakeholders involvement**. The phase takes cognisance of the stakeholder's involvement is the crucial starting point, any changes proposed by the stakeholders may indicate a necessity to enter the set-up phase again. The process should be open and transparent and include all stakeholders, and an effort must be made to reach an agreement and to commit time and resources to the process.

- **Developing the objectives**. Setting SMART (Specific, Measurable, Achievable, Results-Oriented; Timebound) provides a guide along which management decisions will be made and against which the results can be measured. Objectives should not only include the environmental objectives but also social and economic.

- **Alternative actions**. Look at alternatives available to the conservation area manager and determine actions to meet the objectives. Stakeholders should be involved in a process to

develop actions for all the activities management are responsible, and all actions should be documented for learning purposes.

- **Models and frameworks**. Models and frameworks should be researched to address the required actions and should be aligned with the data and information available to make the decisions. The models should also address the uncertainty in the environment and incorporate different scenarios.

- **Monitoring**. Finally, the progress of the should be monitored over time as part of the planning process to determine the system state. The monitoring plan should promote learning and be as accurate as possible given the resources.

The day to day running or iterative phase of the adaptive management process involves: selecting management actions and decisions based on resources conditions and objectives; monitoring the systems to track the actions; assessment to evaluate the outcomes which ultimately feeds back to the set-up phase (Williams, Szaro and Shapiro, 2009).

Stankey, Clark and Bormann (2005) evaluated adaptive management and provided some key learnings: adaptive management is widely acclaimed for conditions under risk and uncertainty by is mostly still an ideal; there are many different definitions of adaptive management; experimentation is core to adaptive management; it involves the explicit design, process and documentation; it requires support from all stakeholders; learning is a crucial output; it is open and responsive to various sources of knowledge; it acknowledges risks and failures; a variety of institutional barriers exist for implementation; and a commitment to adaptive management requires transition strategies to implement it.

Figure 2.20: CMP open standards project management cycle version 3.0

Source: CMP (2013:5)

The Conservation Measures Partnership a consortium of conservation organisations developed the open standards for the practice of conservation. The framework depicted in Figure 2.20 is based on the adaptive management model and incorporates many of the concepts. The conceptualisation, as well as plan actions and monitoring aspect of the framework combined, provide much of the strategic process proposed in earlier sections: defining the purpose, scope, vision and targets; analysing the environment for threats and the conservation situation; developing goals, strategies and objectives; and finally developing a monitoring and operational plan. The balance of the framework follows the adaptive management process and focusses on: implementing actions and monitoring; analysing and adapting; documenting and learning from the process outcome (CMP, 2013).

2.7.4 Conservation Investment Toolkit

Space for Giants and Conservation Capital (2019) on behalf of UNEP and the African Union developed the Conservation Investment Toolkit for African Protected Areas. Although not explicitly developed as a strategic planning tool, this white paper provides a very comprehensive

outline for governments and the private sector to develop financially sustainable conservation areas. The toolkit provides a roadmap to follow as well as critical success variables to make sure the conservation areas are financially sustainable.

The road map follows seven clear steps which the researchers indicate needs to be followed in the order laid out to ensure success. The importance of adequate tourism planning before marketing is mentioned as a reason as the tool includes governmental as well as conservation area management, specifically aiming at public-private partnerships and concession building to fund conservation. Included are the key steps the researchers propose (Space for Giants and Conservation Capital, 2019: 25):

1. National Protected Area Tourism Plan (Government): including market analysis, strategic plan, infrastructure development assessment and priorities.

2. Individual Protected Area Tourism Plan (Protected Area Manager): detailed plan to determine tourism zones, products, infrastructure, local capacity and source markets.

3. Identify Commercial Opportunities (Government): commercial opportunities for concession development as part of national strategy.

4. Award Concessions (Government): identify the best private sector partners.

5. Develop Concession Contracts (Government): identify fee structure and benefit-sharing arrangements.

6. Communicate Clearly (Protected Area Manager): develop and maintain communication with stakeholders.

7. Evaluate and Monitor (Protected Area Manager): design and maintain systems for monitoring and evaluation.

The key contribution that the toolkit delivers is a very comprehensive list of ‘Necessary Variables for Nature-Based Tourism” highlighting nine key success variables involving government and private sector. The nine main variables are (Space for Giants and Conservation Capital, 2019: 21):

- Natural assets;
- Management;
- Political stability;

- Optimised concessions;
- Improved access to infrastructure;
- Strategic marketing;
- Business environment;
- Private sector capacity; and
- Coordinated national planning

The white paper was published after the conclusion of this study and could thus not be integrated into the design of the research. The variable list, however, including its sub-variables published in Chapter 6 provides a meaningful way to draw a comparison with the variables uncovered during the quantitative and qualitative study.

2.8 Summary

The chapter presented some concerns about the state of the environment and our human pressure, as well as the conservation tourism's role in protecting that environment. As humans, we are not only reliant on the environment but also perceive it in unique ways through our mental models. The strategic management of conservation areas provides a way for the conservation area to navigate this complex macro environment.

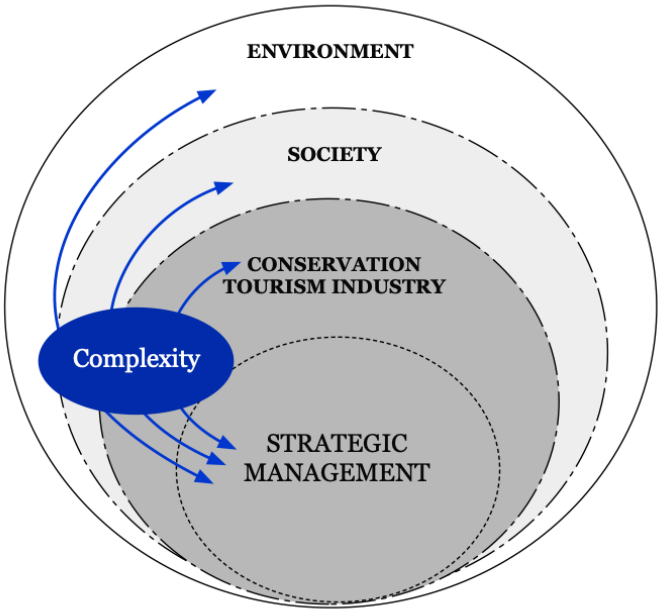

Figure 2.21: Strategic Management of conservation areas

Source: Researcher's compilation

Figure 2.21 provides an outline of the topics covered in the chapter. Global biodiversity is under threat, with about 60% of all vertebrates being lost since 1970. This loss in biodiversity is not the only pressure on our planet. Nine planetary boundaries have been proposed, of which four has moved out of the safe zone biosphere integrity, climate change, biochemical flows and land system change (WWF, 2018). South Africa, although not achieving the Aichi 11 biodiversity target, has seen exceptional successes from private conservation initiatives. Habitat is, however, under severe pressure with the most pervasive being cultivation of crops, urban and infrastructure development (Department of Environmental Affairs, 2014).

Humans have a reliance on nature, however, our perceptions of the state of the environment are influenced by many societal variables. Our mental models play a very big part of how we make decisions (Maani, 2016). These mental models are not only affected by our cultural group and upbringing but also by our human biases and heuristics (Kahneman *et al.*, 1974). It is critical to understand these societal variables not only because of their macro-environmental effect on the conservation firm but also due to their effect on our strategic decision making - a combination which adds to the complexity of the strategic management of conservation areas. Complexity is not only the reason why strategic management is so crucial but also why strategic management is intrinsically complicated.

The concept of the conservation tourism industry encapsulates a broad range of industries and various descriptions. Some of the industry descriptions include consumptive use of wildlife, nature-based tourism, ecotourism and wildlife-based tourism. Conservation tourism is not only crucial for the environment but also the economy as 80% of tourists visiting the continent include wildlife watching in their agenda, the 8400 protected areas in Africa generated 48 billion USD in direct country expenditure (Space for Giants and Conservation Capital, 2019:6). The importance of Industry is crucial to business success (McGahan and Porter, 1997).

Finally, the chapter looks at the theoretical underpinning of strategic planning. The strategy schools can be broadly divided between prescriptive schools and descriptive schools. Prescriptive schools focus on how strategic planning has to be conducted, asserting that planning is rational, and directions can be set. Descriptive schools provide the notion that the environment changes consistently, and the firm is dependent on it (Mintzberg and Lampet, 1999). The study investigates fundamental strategic theories as well as its current application in the conservation tourism industry and its stakeholders.

The literature review provides an overview of the state and pressures on the environment, society as well as an overview of strategic management in the conservation tourism industry. The next chapter will provide a detailed outline of the method utilised in conducting the study.

CHAPTER 3: RESEARCH DESIGN AND METHODOLOGY

"To generate a strategy, one must put aside the comfort and security of pure deduction and launch into the murkier waters of induction, analogy, judgment, and insight" ~ Richard Rumelt (2011:245).

3.1 Introduction

The chapter outlines the method used in conducting the study. First, the chapter highlights the research approach behind the study, as well as the theoretical underpinning for the design. Secondly, the research instruments, data collection and analysis methods are discussed. Thirdly, ethical considerations are highlighted. Finally, the learnings related to the method uncovered during the process is discussed.

A qualitatively driven concurrent mixed method study was used, according to Morse's notation it is indicated as QUAL(quan) (de Vos *et al.*, 2011). The qualitative aspect was utilised to get an in-depth understanding of how the management of the various protected areas are experiencing the various forces and their impact; in-depth interviews were conducted with stakeholders, experts as well as conservation area managers. The in-depth interviews inform us how managers are currently managing conservation areas and how this can be improved. The qualitative interviews were conducted by using semi-structured face-to-face interviews addressed industry, market and external environment of the conservation area business. The second aspect measured the Internal environment and management and planning models of the organisation as well as the resource perspective. Finally, the qualitative study investigated the business success and conservation success of the conservation area businesses.

To get a general South African perspective, a quantitative survey was conducted on the environmental perceptions of South Africans. The environmental perceptions survey was modelled on a New Zealand study that has been conducted over 15 years by Kenneth F. D. Hughey, Geoffrey N. Kerr and Ross Cullen and has proven to provide an accurate depiction of the countries environmental perceptions. The quantitative study gives us an indication of the conservation management quality; it also provides an outline of the business environment that the conservation areas operate in the pressures on the environment, the current state of the protected areas as well as how well the relevant management and public institutions are managing these issues as depicted in Figure 3.1. The survey was adapted to the South African environment (Hughey *et al.*, 2004; Hughey, Kerr and Cullen, 2016). Together the mixed method approach will address the research questions raised in the study.

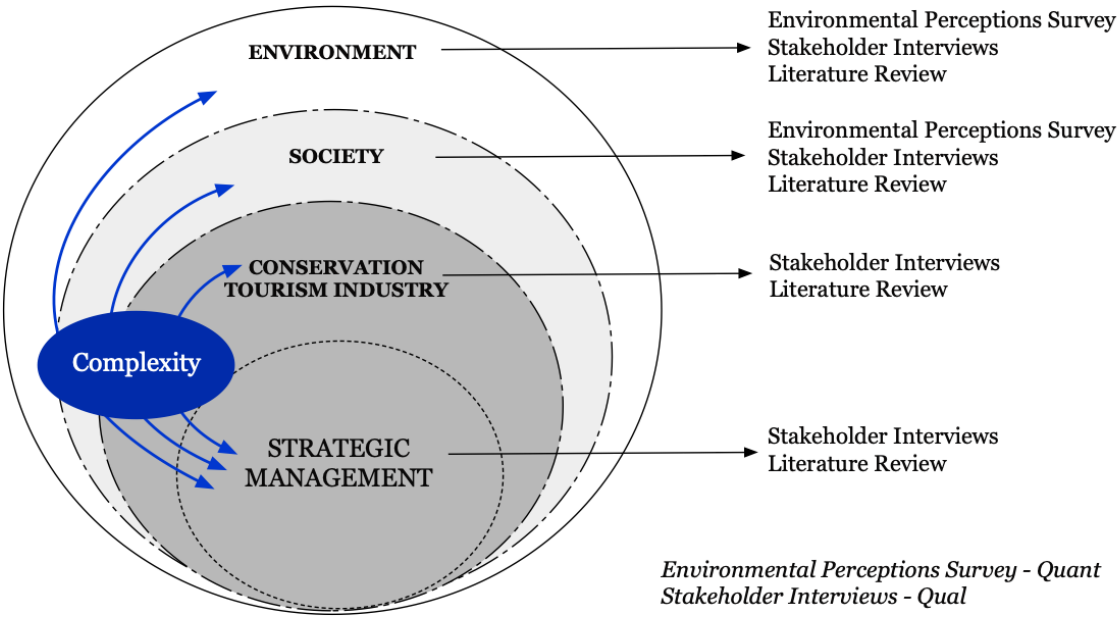

Figure 3.1: Mixed method approach

Source: Researcher's compilation

The primary research question "How do conservation businesses strategically plan for long term financial and environmental sustainability taking into account complex environmental, societal, and industry variables, ultimately securing the land for conservation?" Involves two main areas of study to address, firstly the external environment that has an impact on the firm. This area is addressed in the two studies as follows; the qualitative study addresses the pressures the conservation areas face in their prospective conservation business from an inside-out perspective, examples of this are the legislation on children visiting South Africa and Ebola and their effects on tourism. The external environment is also measured through the quantitative survey by measuring the pressures on the environment, how customers view conservation areas or 'the product/service'. Secondly, the internal environment of the firm is measured by the qualitative study to understand business models and frameworks and current practices. The quantitative survey helps us understand the quality of the management of conservation areas as perceived by the general public. Together by understanding the external and internal environment of the organisation, can we develop a strategic management framework?

Sub-question one "What environmental, societal, industry and business variables has a substantial impact on conservation area success?" is studied through understanding the internal practices and current viability of conservation areas through the face-to-face interviews as well as by understanding the current state and management of the conservation areas and public actions through the quantitative survey. The second question "Does the contemporary strategic

planning frameworks utilised in management and environmental sciences address the strategic planning needs of conservation area managers?" is investigated through the qualitative study. The third question "What are the strategic business models and frameworks conservation area managers currently utilising in their planning?" is investigated through the qualitative study by determining current strategic planning frameworks used in conservation management. The fourth sub-question "What variables do conservation area managers need to consider in their plan to remain sustainable in a competitive environment while preserving environmental integrity?" is answered through the qualitative and quantitative studies. Finally, "What constitutes a strategic management framework for conservation areas to optimise their long term financial and environmental sustainability?" is determined through synthesising the results of the two studies through systems thinking to develop a framework.

3.2 Mixed method research design QUAL(quan)

The qualitatively driven concurrent mixed method research design with the quantitative study informing the qualitative study QUAL(quan) was undertaken for this research project. Mixed methods research can be viewed from two different points of views; the first being that mixed methods research is purely two different studies, one quantitative and one qualitative addressing separate areas of the research. This perspective refers to mixed method research mainly as triangulation. The second point of view is that mixed method research becomes its research type by combining the two methods (Delport and Fouche, 2011). Mixed method research is most associated with the philosophical orientation of Pragmatism. The definition of mixed method research has shifted over the years. Teddlie and Tashakkori (2003) define pragmatism as "a deconstructive paradigm that debunks concepts such as "truth" and "reality" and focusses instead on "what works" as the truth regarding research questions under investigation (cited in Teddlie & Tashakkori 2009).

Tashakkori and Teddlie's (2003) define mixed method research as "a type of research design in which QUAL and QUAN approaches are used in types of questions, research methods, data collection and analysis procedures, and/or inferences" (cited in Teddlie & Tashakkori 2009:7). Creswell and Plano Clark's (2011) in their book "Designing and conducting mixed method research" provides a more comprehensive definition. "Mixed method research is a research design with philosophical assumptions as well as methods of inquiry. As a methodology, it involves philosophical assumptions that guide the direction of the collection and analysis of data and the mixture of qualitative and quantitative approaches in many places in the research process. As a method, it focusses on collecting, analysing and mixing both quantitative and qualitative data in a single study or series of studies. Its central premise is that the use of

quantitative and qualitative approaches in combination provides a better understanding of research problems than either approach alone."

As can be noted by the description of what mixed-method researchers do, the mixed method research design offers a broad range of methodological options described under one method. In mixed method research the researcher (Creswell and Clark, 2011):

- Collects and analyses persuasively and rigorously qualitative and quantitative data;
- Mixes the two forms of data concurrently by combining them, sequentially by having one build on the other, or embedding on in the other;
- Gives priority to one or both forms of data;
- Uses these procedures in a single study or multiple phases of a program of study;
- Frames these procedures within philosophical worldviews and theoretical lenses; and
- Combines the procedures into specific research designs that direct the plan for conducting the study.

This mixed method research study incorporates quantitative and qualitative studies synthesised through systems thinking to answer the research questions. Why mixed method research?

3.2.1 Advantages of a mixed method research approach

The usage of a mixed method approach provides many advantages. Delport and Fouché (2011) in their 'Mixed Methods Approach' book chapter in 'Research at Grass Roots for social sciences and human services professionals' provide a very comprehensive list of advantages that mixed method research provide, the relevant advantages to this study include the following:

- It provides the researcher with the opportunity to verify and generate theory at the same time. Some of the qualitative statements by the managers in this study can now be measured against the public opinion to verify some of the inference deduced from the qualitative study which enables us to deliver a stronger framework.
- Mixed method research provides the strengths of both the quantitative and qualitative research, and it can also reduce the combined weakness providing stronger inference. Qualitative survey method in these results provided a myriad of evidence from the perspective of conservation management; the quantitative survey provided strong data from the perspective of the tourist or South African. The quantitative study lacks the

explanatory “why” element where the qualitative study provides this. The qualitative study lacks the quantifiable opinion data of the South African citizen sample. Together the research study is strengthened by their combination.

- It provides strength to the evidence from the different studies. In this study, the strength of the evidence of the qualitative study is improved by adding quantitative evidence of the public perspective.

- A more diverse assortment of views can be measured in the study. In this study, we can now measure both public opinion or perception as well as the conservation managers providing a stronger study.

- Mixed method research is practical in that it proves us the opportunity in this case to both measure public and conservation manager opinions cost-effectively and efficiently (de Vos *et al.*, 2011).

Kumar (2011) also provides some advantages to using mixed method research including the following:

- The study can be enhanced by addressing multiple objectives of the research with the relevant research tool. In this case, the multiple objectives include measuring the public perceptions or public side of the framework against the conservations managers objectives and outlook.

- Mixed method research enhances research in complex situations. This study indicates the complexity of conservation and the interconnectedness of the environment. Using mixed method research has provided a solution to help understand the complexity and also conduct the research in a complex environment.

- Data is enriched, and additional research evidence is provided in this study. By just using qualitative data and the study of the opinions of the few conservation and tourist managers study the data available for inference would be reduced substantially.

This study includes a quantitative study embedded in an overarching qualitative study, where the qualitative study measures the day-to-day planning, management, environmental variables and success of the conservation areas from the view of the conservation area managers as well as the stakeholders providing a detailed qualitative picture of the current management practices. Analysing how the general public view the environment and the tourism aspect as part of the qualitative study provide us with some definite advantages. The design of a framework for

conservation areas to strategically manage their business and conservation objectives the general public provides the following main inputs. Firstly, it provides a feedback mechanism to understand how well conservation areas are managed with data on the quality of soil, water and conservation resources as well as specific questions on their management. Secondly, the study provides data to understand what is necessary for these respondents to inform the marketing or promotion of conservation area usage. A Third benefit includes the fact that the study measures what respondents have personally done to improve their natural environment, for example how much they have contributed via conservation tourism support compared to recycling.

3.2.2 Disadvantages of a mixed method research approach

One of the sighted research problems that limited the Mixed method research acceptance is the argument that mixed method research falls within two different paradigms, post-positivist which fits with quantitative and naturalistic which fits with qualitative. Today some researchers still believe that the two methods should not be mixed. Mixed method researchers have countered this argument by proposing that Pragmatism be the paradigm that Mixed method research would fit (Delport and Fouche, 2011).

Kumar (2011) provides some disadvantages of using the mixed method design these include the following:

- More data and analysis requires a higher amount of work to deliver the research project. Collecting the data for the two parts of this study required the questionnaire design and data collection via email, social media and face-to-face interviews to deliver the quantitative research data. The qualitative study required an interview guide design as well as data collection in the form of interviews. Resources were also required for transcription and data cleaning in these two studies. The analysis in Tableau and R was also extra to the qualitative analysis in Atlas.ti.

- The mixed method requires additional and diverse skills which had to be developed by the researcher. The mastery of new research designs, tools and methods had a steep learning curve adding to the complexity of the study.

- Two study populations or samples also provide an additional layer of complexity to the study. Recruiting for the qualitative study required the sourcing of willing participants that are stakeholders in the conservation-tourism field. The quantitative study required the sourcing of willing participants that provide a statistically valid representation of the South African populace.

- Resolving disagreements in the data is also another potential weakness if not a strength of the study as it can point out disagreements or anomalies in the data from one of the study data sets.

The mixed method research design followed in this study primarily relies on two research methods, data collection and analysis. The qualitative part of the study included face-to-face semi-structured recorded interviews, and the quantitative study included an online survey. The methods incorporated are not experiments conducted in a controlled environment. The study design does not lend itself to causal inference but instead aim to look for trends through descriptive and categorical analysis.

3.2.3 QUAL(quan) approach in this study

The study follows a research design which uses procedures and methods from both quantitative and qualitative research designs. The qualitative study is the dominant study, and the quantitative study results are incorporated to support the qualitative study notated as follow QUAL(quan). The two parts of the study were conducted simultaneously. According to Kumar (2011), the mixed method study can be developed using methods and procedures from both research paradigms or using methods and procedures from one of the paradigms.

Table 3.1: Data requirement and collection

Objectives	Data required	Data collection methods
1. To examine the current state of the South African macro environment, the conservation tourism industry and societal pressures and its role in successful conservation area management.	Environmental, social and economic information and its impact on the conservation tourism industry. Information on the general state of the conservation tourism industry.	• Literature review • Quantitative online research survey • Qualitative face-to-face semi-structured stakeholder interviews
2. To investigate contemporary strategic management planning models and frameworks in the management and environmental sciences.	Literature on contemporary generic and conservation tourism specific strategic management frameworks.	• Literature review
3. To gain an understanding of the South African public's perception of the pressure on, state of the environment and their	Data to measure the current state of the natural environment. Verifiable data to measure the general perceptions of	• Quantitative online research survey

response to South African environmental challenges to gauge societal variables and its implication for the strategic management of conservation areas.	the South African environment and the management performance in the conservation industry.	
4. To determine the role of public perceptions in determining conservation area management, and more specifically, conservation success.	Data on how conservation is viewed compared to the general public's perception of other environmental concerns. Data to determine the general public's perception of the state and pressure on the natural environment.	• Literature review • Quantitative online research survey
5. To analyse current conservation area management and conservation practices, and investigate their current business planning models/frameworks and determining its role in long term sustainable conservation management.	Variables in the conservation tourism business managers need to plan for. Applicability of generic business frameworks. Understanding of current management practices. Tools, frameworks and processes managers are currently using to do strategic planning.	• Literature review • Qualitative face-to-face semi-structured stakeholder interviews
6. To synthesise the research results to develop a strategic management planning framework for the long term financial and environmental sustainability of conservation areas.	Literature related to generic and conservation tourism strategic frameworks. Measured data on the state of, and pressure on the environment. The public's response to these challenges. Variables affecting conservation areas strategically. Management methods managers are currently using to deal with the challenges.	• Literature Review • Quantitative online research survey • Qualitative Face-to-face semi-structured stakeholder interviews

Source: Researcher's compilation

Table 3.1 indicates the data required to fulfil the objectives of the study as well as the data collection method for delivering the data. The following section indicates how these data collection methods were conducted.

3.2.3.1 Using methods and procedures from both paradigms

To achieve the objectives of this study, two primary methods of collecting data were utilised: face-to-face interviews, and an online survey. Face-to-face semi-structured interviews were conducted to get stakeholder perspectives as well as site-specific details. Business and conservation indicators were included in the face-to-face discussions to understand the implications of various business issues and designs on the overall performance of the conservation area as well as on the conservation objectives. To understand current business models and frameworks of financially sustainable conservation areas a literature review was conducted of the latest conservation management research.

The quantitative online survey provided a general public perspective to address the research question. A proven environmental perceptions study from New Zealand was utilised with permission and adapted to the local environment (Hughey, Kerr and Cullen, 2016). The Pressure-State-Response study measured helps us understand the current perceptions and state of the environment, what pressures people to perceive the environment is under and what they are contributing or doing about it. The two studies were designed separately, and as the Quantitative study was developed in New Zealand, the study design of the qualitative design did not affect the quantitative design. The qualitative design measured aspects of the conservation area management's perspective of the conservation area's management the design was thus not influenced by the perceptions study.

The data collection was conducted in separate projects. As the quantitative study and the qualitative study measured the response from two very different populations, the data collection was kept separate. The data collection of the qualitative study required setting up individual appointments with respondents and physical visits to the sites where interviewees resided — the quantitative study required methods to reach general South African respondents from all over the country via an online survey, due to the very different data forms developed by the two studies the data analysis was conducted separately and on different analytical tools. The quantitative project yielded a data set in Excel that was analysed and visualised on Tableau version 10 and R statistics version 3.6. The qualitative study resulted in audio files which were transcribed and analysed in Atlas.ti.

Systems theory provided an analytical method to synthesise the two data sets and bring different data sets together in causal loop diagrams. Causality cannot be determined by mixed method research. Accurate methods for determining causality include experiments. Maani (2016), however, indicates that for descriptive purposes systems analysis infers causality by finding linkages. All causal links identified through this process need to be tested through

experimentation. As part of our model, we will use the qualitative and quantitative information to help us infer some causality and the interplay between different elements from a systems perspective.

3.2.3.2 Qualitatively driven

As the study aims to develop a framework for strategic management for conservation managers to manage conservation areas better the data gathered from the conservation areas, the stakeholders, as well as the literature and secondary data that informed the qualitative study, is directly linked to the outcome of the framework. The framework is aimed at providing a tool for conservation managers, and some of the respondents interviewed will be the users of the framework in the future. As the public and the tourists visiting these areas is a significant stakeholder in the study the quantitative study of their perceptions will be used as supporting information to the qualitative study.

3.2.3.3 Concurrent

Because the studies were not related and the fact that the methods and procedures did not overlap the studies were conducted concurrently.

3.2.4 Quantitative study as part of a mixed method research approach

In a complex study like the strategic management of conservation areas, it is imperative to understand people's perceptions of the critical issues as a frame for developing a framework. The leading example of such a study can be found in New Zealand who has been studying people's perceptions of the environment for 15 years (Hughey, Kerr and Cullen, 2016). To develop an understanding of South African perceptions permission was requested from the study owners to adopt the study for South Africa. Various adaptations were conducted to localise the language, to shorten the survey to ensure a better completion rate, to remove some non-relevant New Zealand specific questions and in some cases replace them with South African alternatives.

Data collection for the online survey was conducted during the 2016 - 2017 period. Three methods were used to recruit respondents to take part in the online survey; an email campaign, social media campaign as well as face-to-face tablet data collection. The process followed is described below.

Step 1: Identified quantitative perceptions survey tool

Perceptions were highlighted as a method to measure how South African's view the environmental management of South Africa's current state. A search was conducted for a proven

measurement tool to understand the South African perceptions about the environment: the tool needed to include general, popular environmental considerations such as CO_2 as well as the tourism aspect of tourism. When tasked with developing conservation or environmental business or non-profit strategy, how South Africans in general, perceive the environment is of paramount importance enabling the author to understand where the respondents seem to place emphasis and where they believe the most focus needs to be placed. The tool is also essential to understand why one of the most publicised social change requirements yield limited action. The perceptions research can also prove to be very important in the measurement of the current conservation business success. No published research was available in South Africa at the inception of the study. Public Perceptions of New Zealand's Environment: 2016 by Kenneth F. D. Hughey, Geoffrey N. Kerr and Ross Cullen was identified as a study that could inform the research. The study has been studying people's perceptions of the environment for 15 years since 2000 (Hughey, Kerr and Cullen, 2016). A detailed process flow of the study is included below.

Step 2: Obtain permission of the researchers to use the questionnaire

The researchers were contacted in New Zealand to get their permission to use the study in South Africa. Permission was granted, and the researchers indicated a need for research where South Africa could be compared to the New Zealand study. They also indicated that a researcher from Australia had shown similar interest.

Step 3: Adapt the study to South African conditions

To keep the research similar was very important to be able to compare the study with the baseline New Zealand study. The changes made to the study was mainly in two areas — the first included language usage in South Africa vs New Zealand. Some words were changed to local alternatives, for example, the ethnicity options and currencies. The second change to the measurement tool was required as some questions were relevant to only the New Zealand study, so these questions were removed. The 2016 New Zealand study included a section on introduced species and questions on predator and pest control methods as well as at-risk species not included in previous studies. These questions fell outside the pressure, state, response scope of the study and were excluded. An example of such a question is "The following is a list of species that have been introduced to New Zealand. Based on what you have seen or heard, to what extent do you believe each is a threat to New Zealand's native plants, birds, animals or natural environments?". The changes also assisted in reducing the length of the survey which would have affected the response rate of the study.

Step 4: Trial survey and language editing

A trial survey was conducted with a small group of respondents. The main aim was to understand if the survey would translate into the South African environment. The response was positive, and some minor language editing was suggested. The questionnaire was sent for language editing to check and minor changes were made.

Step 5: Data collection

The data collection was conducted from 6 Jul 2016 – 20 January 2017. It was conducted using three primary methods email, social media and face-to-face iPad completion to gather the required response. The objective was to reach 1111 respondents (section 3.4.1.1.1 presents the sample calculation). The data collection yielded 1327 responses to the survey.

Step 6: Data analysis

The data analysis was conducted using Tableau version 10 to visualise the data as well as the Statistical package *R version 3.6* for further statistical tests.

3.2.5 Qualitative study as part of a mixed method research approach

It is imperative to understand the environment in which management takes place. As we need to understand the issues management face every day, it is essential to hear from them what the everyday issues are. By looking at issues using inductive reasoning we can find out what the issues are from the perspective of the site manager. Face-to-face semi-structured interviews were conducted during the 2015/2016 period. The interviews included management of conservation areas, tourism managers as well as other stakeholders in the conservation tourism industry sourced through purposive sampling to ensure the correct stakeholders are interviewed. The focus was on collecting data from different protected area classes as indicated in the IUCN categories, private conservation areas as well as geographies and biomes. The interviews also included experts in the field who can give guidance on the issues that affect the industry.

The face-to-face interviews were essential in all the conservation measures to understand the impact of the visitors as well as the growth in land area under protection as a result of increased tourist activity. Looking for ways to grow the areas under protection as well as limiting the impact tourism has on the current areas. The interviews were conducted to gauge for example: environmental variables that affect in industry, bargaining power of suppliers, the threat of substitute products, risk of entry of competitors and the rivalry among conservation areas. The interviews provided information about how important the actual conservation resource is compared to the activities that take place. Face-to-face interviews were also conducted to

understand the role of intermediary in the conservation tourism market. A detailed process flow of the study is included below.

Step 1: Develop questions through literature review

The qualitative study formed the overarching method of collecting data to inform the framework for strategic management in conservation areas. The questions were pertinent to understand how conservation business and public companies do their current planning and what gaps can be identified in the planning system. The tool needed to include what methods are currently being used, how much time is spent planning, which are the primary value drivers in the conservation tourism sector, the competitive forces and which models would best fit their business models. The study was developed in a semi-structured interview. The interview guide is presented in Appendix B.

Step 2: Sourcing stakeholders in the conservation tourism industry

A broad selection of vital stakeholders and conservation area managers were approached and invited to take part in the study by phone. Face-to-face meetings was arranged with key individuals. The sample included conservation tourism management in the private sector, municipal conservation area managers, provincial tourism area managers and stakeholder in the conservation tourism industry. The study was conducted with interviewees in conservation as well as tourism roles.

Step 3: Interviewing experts and recording

The interviews were planned and appointments set with the relevant managers. The interviews were in the form of one-hour interviews. In some of the cases, this time allotment was not enough due to the very complex nature of the subject as well as the passion the stakeholders had for the subject under discussion. Some business management terms needed to be explained as most of the managers were not trained in business terminology. The interviews were recorded on a cellular phone recording system. Permission for recording the interviews was first requested together with the signing of the consent form (Appendix A).

Step 4: Transcription, coding and summarising

A professional transcription service provider did a verbatim transcription of the researcher's questions and interviewee's responses from audio to Microsoft Word files. Some cross-checks were conducted to verify the quality of the transcriptions.

Step 5: Data Analysis

The data analysis was conducted in Atlas.ti a leading qualitative analysis tool during the time of the study. Inductive analysis was performed where the researcher identified vital topics in the text

and labelled them in the system. Induction was used to let dominant themes in the research emerge without preconceived notions of what the themes should be. Quotes related to these topics were then identified in the text to inform the study.

3.3 Research instruments

The research process started by choosing the research instruments. The quantitative study required a survey instrument that has been validated. The qualitative research design utilised a semi-structured face-to-face interview guide.

3.3.1 Quantitative survey (online and face-to-face questionnaire)

The survey instrument used was developed in New Zealand called Public Perceptions of New Zealand's Environment: 2016 by Kenneth F. D. Hughey, Geoffrey N. Kerr and Ross Cullen has been running for 15 years. This validated survey tool is based on the Pressure-State-Response (PSR) model of environmental reporting and according to the researchers remains the only long-running survey of this type in the world (Hughey *et al.*, 2004; Hughey, Kerr and Cullen, 2016). The selection of this study was specially chosen to enable a broad look at the environmental perceptions in South Africa. A research field which is substantially lacking. The using of an existing research survey instrument is advantageous in a couple of ways. Firstly we have a validated survey which methodology has been proven to provide accurate results in New Zealand. Secondly, it provides a frame of reference for the broader concepts to study. Thirdly we have a baseline to compare the South African data too.

The survey tool questionnaire (Appendix C) firstly starts with some broad overview questions regarding that state of South Africa's natural environment, overall living standards as well as the respondent's knowledge of environmental issues. The tool also measures the state of the environment. The central part of the survey was quantitative rating-type questions including Likert scale and other quantitative measures. Two open qualitative questions were included in the survey to understand what the main environmental issues are that the respondents perceive in South Africa. The study design follows a pressure-state-response model discussed below:

- **Pressure**. The pressure questions include a section where the respondent is asked to identify the three leading causes of the damage. Natural resources such as air, land, water, soil and marine fisheries are measured. The range of causes included a range of human impact variables including motor vehicles; household waste; industrial activities; pests and weeds; farming; forestry; urban development; mining; sewage and stormwater; tourism; commercial fishing; recreational fishing; dumping of solid waste; hazardous chemicals and other.

- **State**. The state of the environment is measured in four sections first the respondents were asked to indicated the state of the natural environment. The state of the natural environment is followed by the quantity of land area allocated to the natural environment. The next measure is the respondent's perception of the management of various harmful substances and waste in the country as well as human impact. Lastly, the respondent is asked about the management of natural resources and managed areas. These concepts are measured with five point Likert type questions in the state of the environment a range of Very Good to Very Bad and in the case of the management Very Well Managed to Extremely Poorly Managed.

- **Response**. The response section measures the actions the respondents took over the last 12 months. It was measured on a three point scale Yes, Regularly and No. Each of the questions had a don't know element added. In this section 16 central actions were measured from the reduction of electricity and water; their visits to conservation areas; their everyday actions to limit their impact; their consumer actions concerning shopping habits as well as their proactive environmental actions such as joining an environmental club.

In New Zealand, this study is utilised to generate a report that is delivered every two or three years. The study was first conducted by a mail survey and in the last periods via an online delivery method. Two thousand respondents took part in the New Zealand study (Hughey, Kerr and Cullen, 2016) compared to 1327 in the South African study.

3.3.2 Qualitative survey (semi-structured interview)

The study investigates optimal strategic management and planning in the management of conservation areas and to understand what current management practices include. It is imperative to understand the knowledge of these strategic management tools and processes and also to measure some vital strategic models and see its relevance in the conservation industry. Two industry schools of thought were investigated including the competitive models based on Porter’s five forces (Porter, 2008) and adapted models, as well as the 'resource focused' models were also discussed. The industry and business success in this industry is investigated to understand how the conservation industry key stakeholders are essential to indicate what drives success in this industry. Size of business, competition in the industry and Industry competitive advantage was discussed. Specific questions were asked to try to understand what drives success in the conservation tourism industry. Conservation success is studied to measure how tourism impacts the conservation initiative, how conservation is funded and if tourism provides for the funding as well as resources committed to this and how it is measured.

The semi-structured interview guideline is attached in Appendix B. The guideline document was laid out in seven distinct sections with a range of questions in each. The first being demographical questions to get an understanding of the type of business and the respondent's role in the organisation. The size of the business was measured in this area by asking the number of employees, the number of beds and the turnover.

3.3.2.1 Industry

Section two covered the industry variables. It opened up the respondent to discuss various industry type issues including the role of competition, the attractiveness of the industry, how the respondent sees the industry fitting in the overall South African economy. The Porter's five forces model categories were used to ask the respondent about the supplier power; customer power; the threat of new entrants; competitors; substitute products. Further forces were added according to literature including government and cooperation.

3.3.2.2 Resources

Resource variables were discussed to understand how interviewees measure their resources and to see if their companies look at the company mainly through the resource lens or from a competitive industry viewpoint.

3.3.2.3 The market

A slightly more focused description than the industry involving the customers and suppliers of the firm as well as the competitors were discussed. The size of the market, their businesses position in this market and if they believe it is an attractive market segment.

3.3.2.4 Planning

The respondents were then asked about their planning process and practices and if they use any strategic frameworks in their planning process. Long-term and short-term planning were discussed to understand the role of strategic planning.

3.3.2.5 Business success

Questions were asked to understand if the respondents see the business as successful. Specific focus was placed on what variables ensure success in the business. What are their critical success variables; the source of capital; financial sustainability. This section also included some question to understand if the respondents felt the role of their business was to deliver a profit or for more altruistic reasons.

3.3.2.6 Conservation success

In some cases, the conservation success was answered by staff involved in the conservation area and the business questions by the resort or tourism management an indication of a clear split in roles. This section included the conservation objective; how conservation is managed; effect of tourism on the area and how management dealt with the primary conservation issues. The interaction between business and conservation was also discussed during this section. Is the conservation planning done with business planning or separate; does funding drive conservation or the other way round; conservation planning. Some contemporary issues were also discussed during this section including waste management; CO_2; Sustainability of the resources and hunting.

3.4 Data collection

The data collection was conducted concurrently during the 2015-2017 period. The data collection included stakeholder interviews and an online survey as well as top up interviews to broaden the demographic scope of the online survey.

3.4.1 Quantitative survey (online and face-to-face questionnaire)

The online survey data collection was conducted via email and on social media. The target group was a broad selection of South Africans to understand their environmental perceptions. The survey was delivered in the form of an email and advert on Facebook. The respondent would then be directed to the online survey. To reduce the respondent error due to bias, the respondents were not informed that the study was about the environment but a more general description "South African perceptions" were used. The objective was to produce a scenario where only participants take part that has an interest in green issues.

The following section focuses on the sample and demogrpahics of the quantitative part of the study.

3.4.1.1 Sample and demographics

The 2016 survey was delivered over a period from 6 July to 23 September. The survey was loaded on an online survey platform hosted by iFeedback. The online survey was distributed by email utilising the Interactive Direct and iFeedback Citizen Science database as well as social media. The social media component included a Facebook advert that was targeted at adult South Africans that have a Facebook account. As depicted in table 3.2 a total of 1127 completed the survey in this format.

The data collection drive resulted in race demographic skewed to white respondents that reside in urban areas. The reason for this appears to be, firstly, because this group proved to be willing to opt-in to the email campaign, secondly, a homogenous group shared the survey link onto friends and family. A further data collection was then conducted to expand on other demographics. A further 200 respondents of different demographic groups were sourced by targeting other race groups residing in rural areas in the Western Cape. Only responses that completed the survey in full was analysed to ensure data integrity.

The Western Cape face-to-face data was conducted on tablet devices, capturing data directly onto the online survey system, adding to the already collected data. Ten professional interviewers were used to conduct the environmental perceptions survey with coloured and black respondents. An effort was made to ensure that some of these respondents were from rural areas in the Western Cape province to expand the number of rural respondents. The extension of the study to rural areas was to ensure a broad spectrum of respondents for the study. This face-to-face tablet data collection was conducted during January 2017.

Table 3.2: Quantitative data collection phases

Date	Source	Number of Respondents
6 July – 6 September 2016	Email Campaign	250
6 - 23 September 2016	Facebook Campaign	877
20 January 2017	Face-to-Face	200

Source: Researcher's compilation

To understand the representativeness of the study, and to frame the responses, it is essential to understand the how the demographics of the sample compared to the demographics of nature-based tourists as well as the sampling error of the number of survey respondents.

3.4.1.1.1 Determining the size and representativeness of the sample

To get a like for like comparison the respondent split is compared to the StatsSA Mid-year population estimates (2016) as this was the year when the majority of the data was collected. The total population of South Africa at this point in time was estimated at 55,91 million. The sample size was determined using the simplified Yamane (1967:886) formula presented in Equation 3.1.

$$n = \frac{N}{1 + N(e)^2}$$

Equation 3.1: Yamane sample size formula

Source: Yamane cited in Israel (1992:4)

The calculation at a precision (e) of about 3% determined that a sample of 1111 would be required for the results acceptable at a 97% confidence level. Do socio-demographic factors influence the travel behaviour of visitors to nature-based tourism products? Slabbert and Du Plessis (2013) conducted research to determine this in South Africa by interviewing 1300 respondents in SANParks. The research indicated that the respondents were reasonably homogenous and shared some socio-demographic characteristics. Most visitors 81% are married, 52% are Afrikaans and 39% English speaking, 81% have an education a post-matric qualification.

Because the research was conducted requesting the majority of the respondents to voluntarily opt-in to the survey via an email and social media invitations an exact match of the demographic profile could not be guaranteed. The demographic profile of the respondents who opted into the survey does, however, reflect a similar profile to the typical nature-based tourist.

3.4.1.1.2 Location of respondents

The study was conducted across South Africa to get a representative indication of the South African perceptions regarding the environment. Four hundred ninety-one respondents in Gauteng provides the majority of the respondents (37%), According to Stats SA Gauteng has the highest population in South Africa the contribution is however lower at 24%.

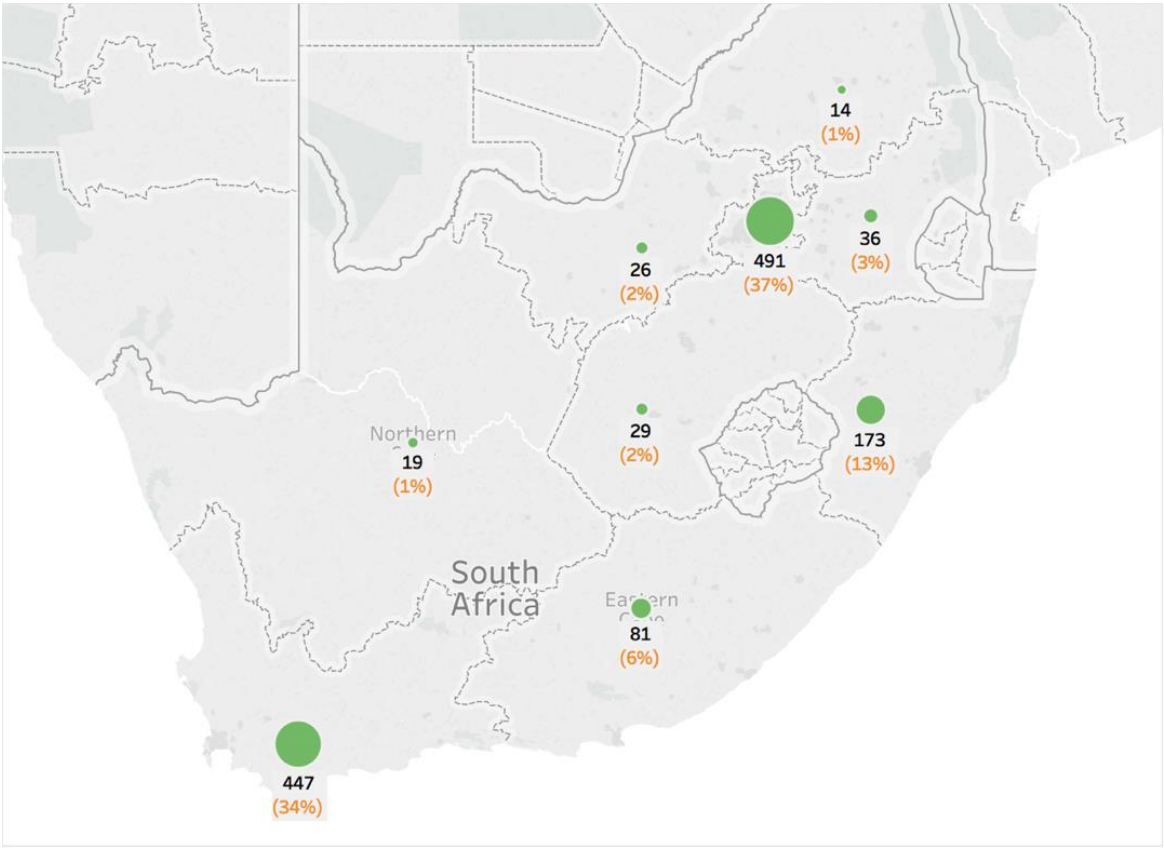

Figure 3.2: Respondents by province

Source: Researcher's compilation

According to Figure 3.2, the contribution of the 447 respondents in Western Cape province (34%) is higher than the population percentage of the region (11.3%) as a separate face-to-face initiative with 200 individuals was conducted in this region to reduce the racial bias noticed in the initial online study. KwaZulu Natal provided the third-highest response at 13% (173) compared to the national population contribution of 19.8%. Eastern Cape followed at 81 respondents a contribution of 6% to national. Compared to the StatsSA provincial split (12.6%) the Eastern Cape it is underrepresented in the sample. The balance of the regions contributed between 1-3% to the national number (Statistics South Africa, 2016).

Table 3.3: Demographic profile of respondents

	Count	Percentage
Gender		n=1324
Male	720	54.4%
Female	604	45.6%
Race		n=1324
White	911	68.8%
Black	236	17.8%
Prefer not to say	114	8.6%
Coloured	29	2.2%
Indian	18	1.4%
Other	16	1.2%
Town or City		n=1322
City (major urban area)	752	56.9%
Town (more than 15,000 people)	362	27.4%
Rural Area	208	15.7%
Education		n=1322
Primary school	11	0.8%
High school, without matric	97	7.3%
High school, with matric	343	25.9%
Trade/technical qualification or similar	159	12.0%
Undergraduate diploma/certificate	297	22.5%
Bachelors degree	171	12.9%
Postgraduate	244	18.5%
Employment Status		n=1324
Paid employment, working 30 or more hours per week	661	49.9%
Retired	289	21.8%
Other	122	9.2%
Unemployed	100	7.6%
Paid employment, working less than 30 hours per week	95	7.2%
Home duties	25	1.9%
Unpaid voluntary work	20	1.5%
Student	12	0.9%
Ocupation		n=1302
Business owner or self-employed	272	20.9%
Business manager or executive	245	18.8%
Technical or skilled worker	174	13.4%
Clerical or sales employee	150	11.5%
Teacher, nurse, police or other trained service worker	122	9.4%
Other, please specify ()	100	7.7%
Professional or senior government official	90	6.9%
Labourer, manual, agricultural or domestic worker	59	4.5%
Semi-skilled worker	53	4.1%
Farm owner or manager	22	1.7%
Have never been in paid employment	14	1.1%

	Count	Percentage
Ocupation		n=1301
Business owner or self-employed	272	20.9%
Business manager or executive	245	18.8%
Technical or skilled worker	174	13.4%
Clerical or sales employee	150	11.5%
Teacher, nurse, police or other trained service worker	122	9.4%
Other, please specify ()	100	7.7%
Professional or senior government official	90	6.9%
Labourer, manual, agricultural or domestic worker	59	4.5%
Semi-skilled worker	53	4.1%
Farm owner or manager	22	1.7%
Have never been in paid employment	14	1.1%
Industry		n=1287
Other community, social and personal service activities	176	13.7%
Manufacturing	162	12.6%
Wholesale and retail trade	140	10.9%
Education	134	10.4%
Financial intermediation	115	8.9%
Construction	94	7.3%
Transport, storage and communications	84	6.5%
Hotels and restaurants	75	5.8%
Health and social work	69	5.4%
Agriculture, hunting and forestry	63	4.9%
Real Estate, renting and business activities	47	3.7%
Mining and quarrying	42	3.3%
Public administration and defence	42	3.3%
Electricity, gas and water supply	40	3.1%
Fishing	4	0.3%
Annual income from all sources before tax?		n=1321
R0 to R100,000	246	18.6%
R100,001 to R200,000	171	12.9%
R200,001 to R300,000	150	11.4%
R300,001 to R400,000	103	7.8%
R400,001 to R500,000	73	5.5%
R500,001 to R700,000	88	6.7%
R700,001 to R1,000,000	80	6.1%
R1,000,001 to R1,100,000	15	1.1%
R1,100,001 to R1,200,000	13	1.0%
R1,200,001 to R1,300,000	15	1.1%
R1,300,001 to R1,400,000	7	0.5%
R1,400,001 to R1,500,000	6	0.5%
R1,500,001 or more	30	2.3%
Prefer not to say	289	21.9%
Loss	35	2.6%

Source: Researcher's compilation

Table 3.3 provides a breakdown of the demographic profile of the study respondents. The demographic profile includes a comprehensive spectrum of respondents, and most demographic segments are represented in the research. The demographic profile is skewed to white respondents (68.8%) who stay in cities and towns (84.3%). The majority of respondents have paid employment (49.9%) working more than 30 hours per week and earn less than R400,000 per year. A significant number of respondents opted not to share their race (114) and income (289).

It is essential to understand the overall profile of the respondents. The result, however, includes a very diverse range of respondents representing different geographies, communities, genders and professions. The following section provides a detailed breakdown.

3.4.1.1.3 City, town and rural split of respondents

The sample is skewed to residents of cities (56.9%) and towns with more than 15,000 people (27.4%) in South Africa. The low rural percentage (15.7%) of the sample indicated by the numbers in Figure 3.3 provides some insight to the skew.

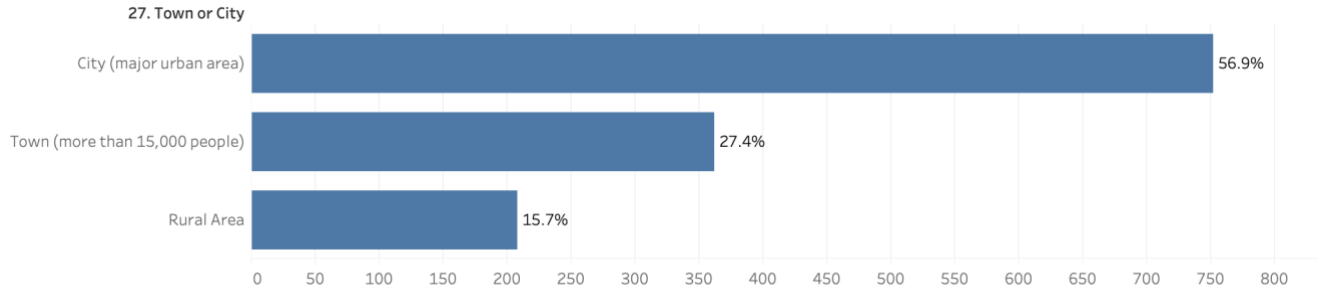

Figure 3.3: Urban and rural split of respondents

Source: Researcher's compilation

As the majority of respondents live in Cities and Towns or urban areas (84%). To enable a split that is aligned with the national contribution a different methodology would be required. The completion of an online survey is reliant on the respondents access to an internet connection and the availability of data on the mobile phone a luxury that many rural respondents may not have (Statistics South Africa, 2016).

3.4.1.1.4 The gender profile of the respondents

The gender profile is slightly skewed to males as presented in Figure 3.4.

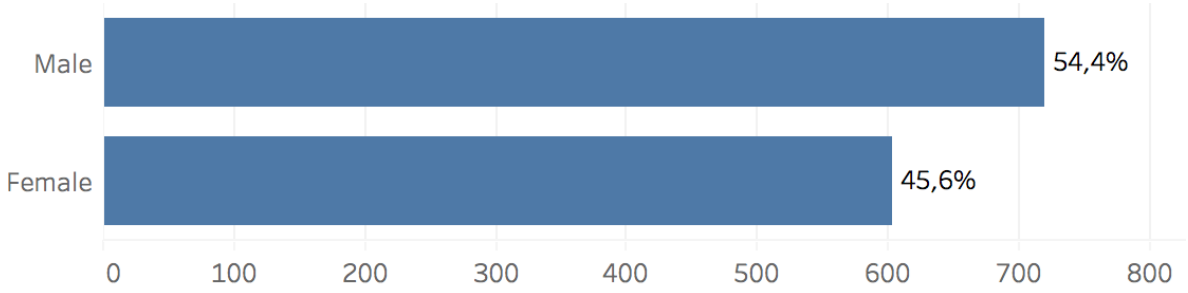

Figure 3.4: Respondent gender split

Source: Researcher's compilation

The majority of the respondents were male (54%), female respondents represent 46% of the sample. According to StatsSA (2016), the number of females in South Africa outstrip the males at a 51% contribution to the total population.

3.4.1.1.5 Population group split of the respondents

As noted in Figure 3.5, the population group profile of the respondents is skewed toward the white (68.8%) population compared to Statistics South Africa's estimate of 8.1%. The methodology of online and email survey for respondent recruiting had a significant influence on the type of respondent who opted into the survey.

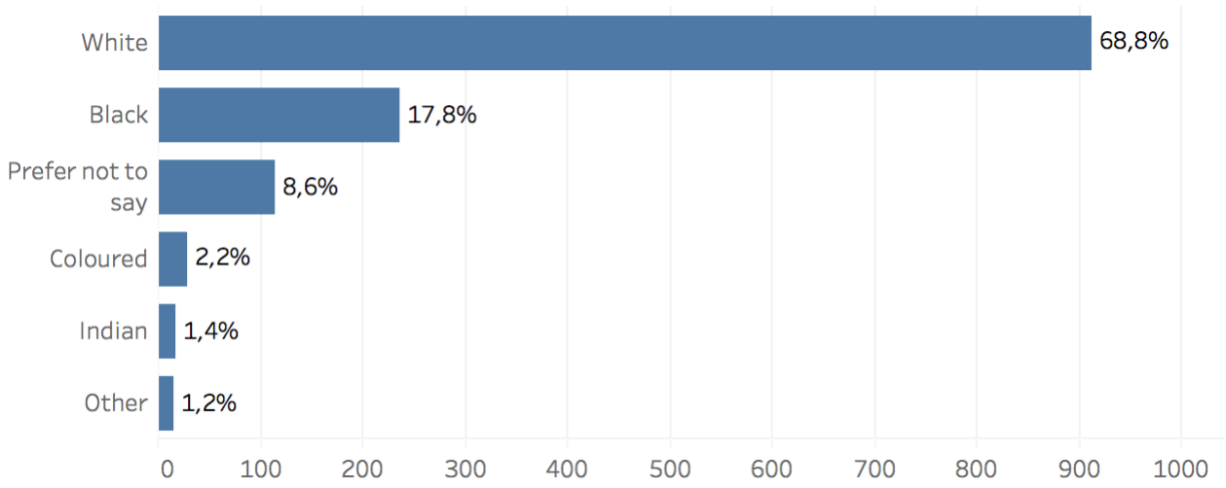

Figure 3.5: Respondent race split

Source: Researcher's compilation

The study was extended to include a rural face-to-face study that was focused on black respondents, providing a total of 236 black respondents 17.8% of the sample. 8.6% of respondents preferred not to divulge their race. Statistics South Africa put the contribution of African respondents at 80.7%. Coloured respondents represented 2.2% in the study compared to the 8.8% contribution to South Africa overall. Indian respondents represented 1.4% in the study compared to the national average of 2.5%. It has to be noted that Statistics South African bundles Indian and Asian together in a category where an Asian may have opted for the other (1.2%) category in the environmental perceptions study (Statistics South Africa, 2016).

The South African population statistics indicate that the overall majority of the country's inhabitants identify as black. However, the market share of Black domestic tourists is reported at 24.6%(Butler and Richardson, 2015) and in 2016/2017 35.7% of day visitors and 10.6% of overnight visitors to SANParks were black (SANParks, 2018), aligning closer to the demographic profile of respondents who opted to take part in this survey. Barriers that affected post-apartheid visitation of national parks by black visitors included economic reasons, lack of paid holidays, leisure "immobilities", transport issues, time constraints and a lack of knowledge of what to do in national parks (Butler and Richardson, 2015).

3.4.1.1.6 The educational level of the respondents

The education levels of the study had a representative split across all education levels with a functional diversity of views expressed along with this demographic as presented in Figure 3.6.

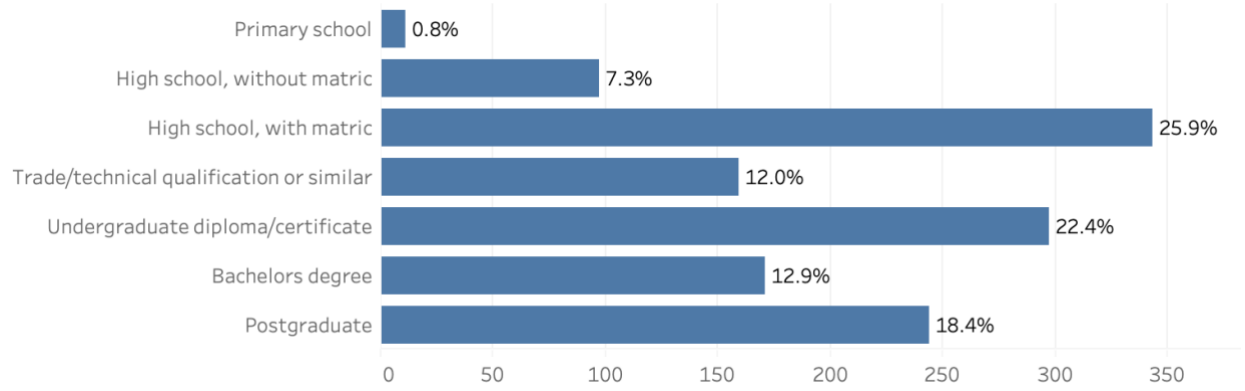

Figure 3.6: Respondent education split

Source: Researcher's compilation

Majority of the respondents had a matric (25.9%) respondents who had a high school with no matric represented 7.3%. 12% of respondents have a trade or technical qualification. Undergraduate respondents represented 35.3%, with 12.9% of this number indicating they have bachelor degrees. Postgraduate respondents are represented by 18%. Compared to the typical nature-based tourist as identified by Slabbert and Du Plessis (2013) 81% of which hold a post-matric qualification, 64.7% of the respondents of this study holds a post matric qualification.

3.4.1.1.7 Employment profile of the respondents

The status of the respondents' employment was measured and are presented in Figure 3.7.

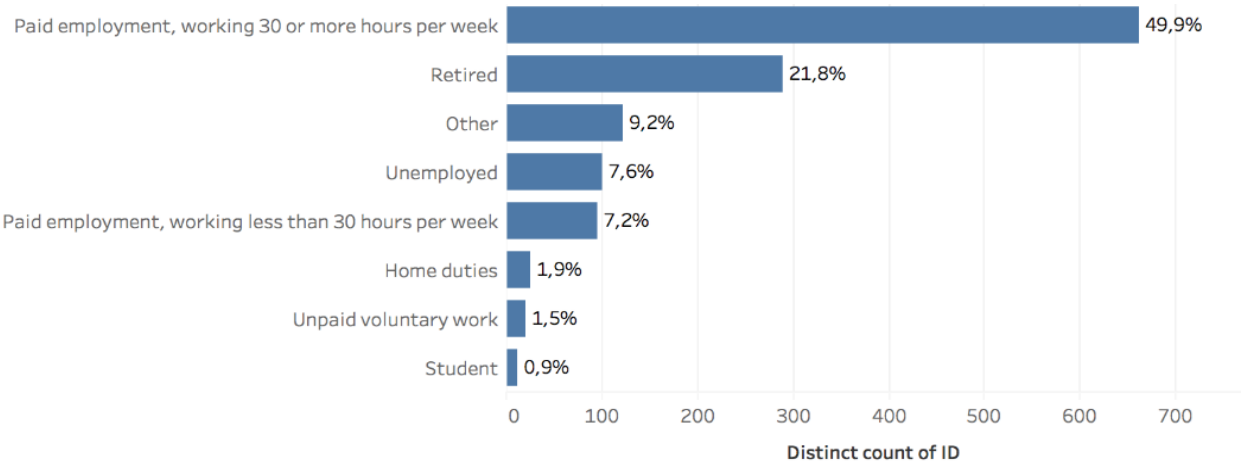

Figure 3.7: Respondent employment status

Source: Researcher's compilation

The majority of respondents (50%) are employed. Size of the sample indicated they were retired at 21.8%. 7.6% of the respondents indicated they were unemployed at the time of the study. 7.2% indicated they work less than 30 hours per week, 1.9% that they do home duties and 0.9% that they are full-time students.

3.4.1.1.8 Occupation of the respondents

Figure 3.8 presents a broad range of occupations the respondents represent.

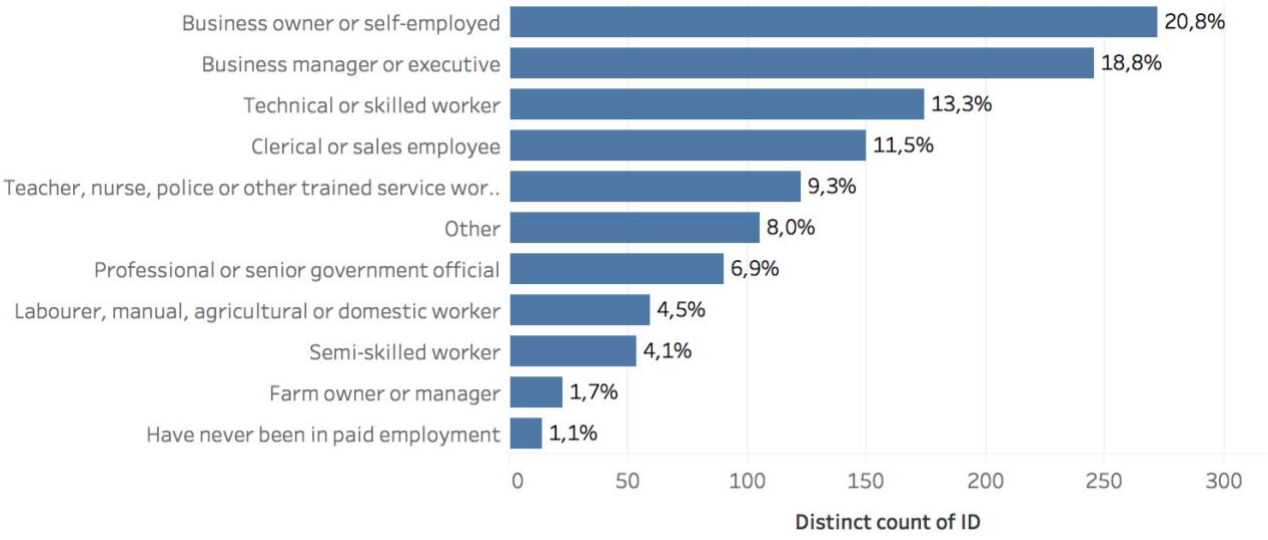

Figure 3.8: Respondent occupation

Source: Researcher's compilation

The results showed that 20.8% of the respondents indicated they are self-employed, 18.8% that they are business managers or executives. 13.3% saw themselves as technical or skilled workers. Clerical and sales employees followed with 11.5% of the sample. Respondent in the teaching, nursing and police services totalled 9.3%. Professional or senior governmental officials came in 6.9% followed by the manual labourer, agricultural and domestic workers. Semi-skilled workers represented 4.1%, farm owners and managers 1.7% and 1.1% indicated they have never had employment.

3.4.1.1.9 Income level of the respondents

Although the majority of the respondents preferred not to divulge their income levels, a diversity of income levels are represented and presented in Figure 3.9.

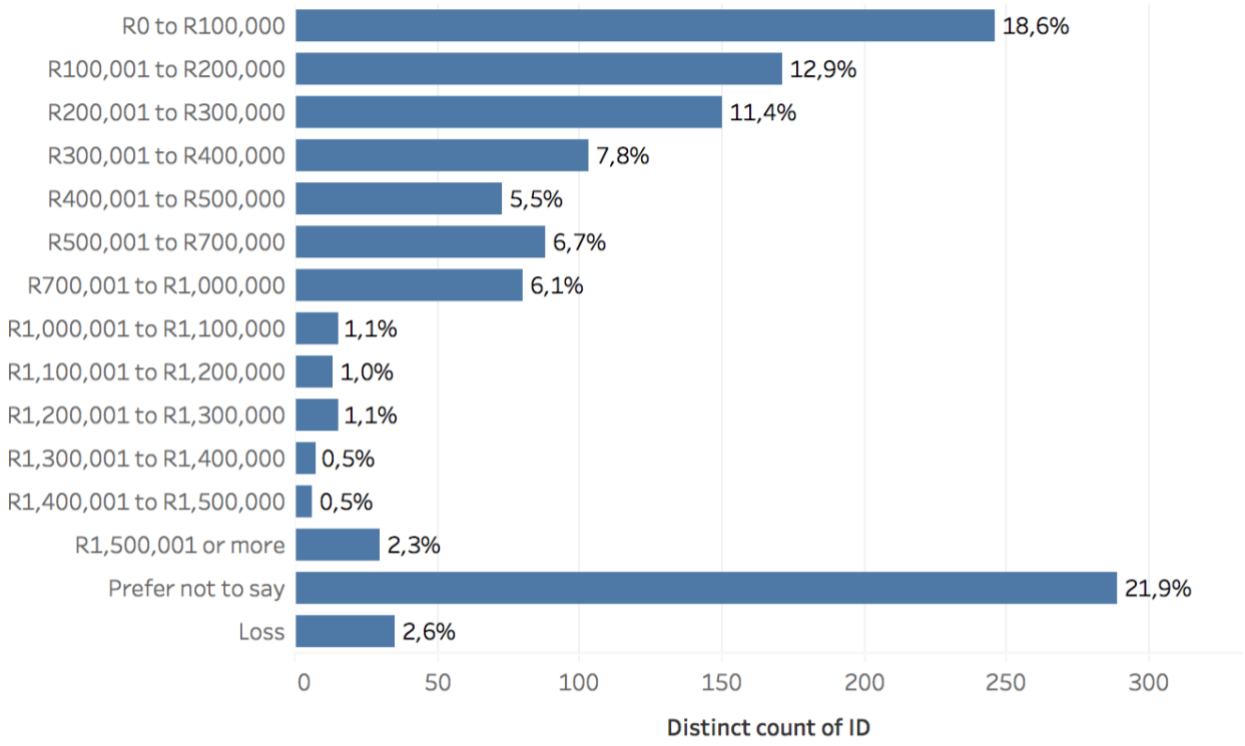

Figure 3.9: Respondent income

Source: Researcher's compilation

Most income levels were well represented with the most number of respondents indicating they earn less than R100,000. 56.2% of respondents earn less than R500,000. 12.8% earn between R500,000 and R1 million.

3.4.1.1.10 Industries in which respondents are employed

A good cross representation of respondents' industries was achieved and is presented in Figure 3.10

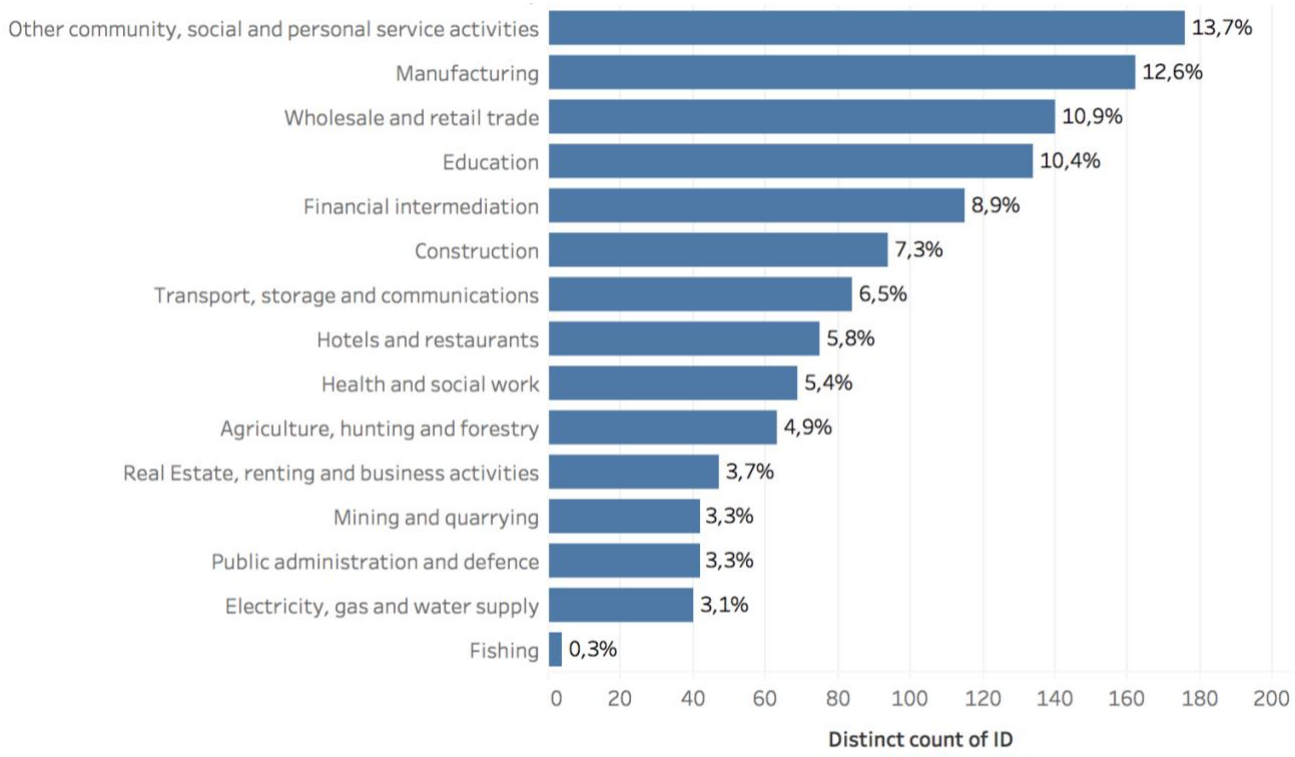

Figure 3.10: Respondent industry

Source: Researcher's compilation

The most significant response represented by other community, social and personal service activities (13.7%), manufacturing (12.6%) and wholesale and retail trade (10.9%). Overall the demographic split is well represented across most areas measured except for the racial demographic. A small regional face-to-face study was added to the survey to add some perspective to this demographic.

3.4.2 Qualitative (semi-structured interview)

The data collection for the stakeholder interviews was conducted during 2015/2016 period. The stakeholder interviews were planned to involve key personnel from conservation area management private and the public. The key insights sought included: the management of the conservation areas; the relationship between conservation and the management function; the opinions of the shortcomings of the current management methods and the needs that these conservation areas have. The data collection included multinational conservation companies, municipal conservation areas, provincial conservation areas, Private conservation areas, conservation service providers in the form of industry marketing agents. The companies interviewed a comprehensive spectrum of conservation areas in South Africa spanning all significant biomes.

All face-to-face interviews were recorded on a cellular phone on a system called iTalk. The app was selected due to its ease of use, its ability to export to a file management system as well as its clarity of voice recording. Tests of the software were conducted to check the voice integrity before the interviews. Once in the interviews, the software performed well. Initial interviews recordings were also checked to ensure the quality of the recordings were up to standard.

Interviews were conducted in a one-hour format from a semi-structured questionnaire. The questionnaire design turned out to net an interview slightly longer than 1 hour. Most of the participants were happy to increase the time spent in the interviews as they found the topic engaging. In most of the conservation areas, the tourist management teams are split from the conservation management teams. Some of the parks included two interviews within the same conservation area to address these two different departments. In total 15 Interviewees took part in the study. The sample to this research study is discussed in more detail in the next section.

3.4.2.1 The sample

The stakeholder interviews include certain key individuals in the tourism conservation Industry. The selection of stakeholders includes a broad selection of interviewees who have insights into the conservation tourism industry from various points of view. The interviewees include three large conservation tourism business corporations, three small privately managed conservation resorts, three municipal reserves, one biosphere reserve, a private tour operator, a Sector Education and Training Authority (SETA) as a supplier of industry employees, offering training and marketing support to the industry. Some of the interviewees responded to the questions in Afrikaans, for accuracy these comments were published verbatim.

The scope of conservation areas that are covered by the interviews includes private conservation areas and resort concessions operated in provincial and national parks and privately owned conservation areas in South Africa and the rest of Africa. Public conservation areas covered by the study include municipal and provincial conservation areas. The interviews represented private and public institutions who manage conservation tourism initiatives in the following South African geographical areas: Gauteng; Kwa-Zulu Natal, Western Cape, Limpopo, Mpumalanga, Eastern Cape. Interviewees from certain organisations had some responsibility for conservation areas outside South Africa, comments relating to conservation areas outside South Africa were included in the study where they added value to the study. Biomes represented in the study included the Savannah, Fynbos, and Grassland biomes.

Each respondent was provided with a code where the first digit represents the order of the respondent(s). The second digit indicates if the company is a private (P), government (G) or

stakeholder (S). The final digit indicates whether the company is classified as a small conservation area (S), large conservation area (L) or Other Stakeholder (O). Small and large is based on the number of employees rather than land under management. Fifteen (15) interviews were conducted, the respondents included individuals in the following positions:

- **1PL: Interviewee 1&2**. Two senior management respondents from a multinational conservation tourism company which employs 1700 employees and hosts operations across Africa, some of which are wholly owned and others with concessions in large public conservation areas. One interviewee represented the business management function and the other had a conservation position. The businesses main function is hospitality in conservation tourism areas.

- **3PS: Interviewee 3 and 4.** A resort manager and the individual responsible for conservation initiatives at a privately owned conservation area in the Limpopo province. The conservation area is owned by an international investor and runs Independently to produce returns. The conservation area has three main value-creating initiatives: firstly providing field guide, hospitality and vocational training; secondly, acting as a conservation tourism resort; thirdly, having an active farm with cattle and some wild (mammal) breading initiatives.

- **5SO: Interviewee 5**. A senior manager at a conservation SETA with years of conservation experience. The business is responsible to train field guides and other employees in the conservation tourism industry.

- **6PL: Interviewee 6**. A group operations director at a hospitality group who runs multiple hotels, lodges and timeshare resorts in Southern Africa. This privately-owned group employs approximately 650 employees. Their business model includes a casino, timeshare, hotels, conservation initiatives, conferences and spas. The conservation areas under management mainly generate income from international tourists, local tourists and conferences.

- **7GS: Interviewee 7**. A functional executive at an almost 4000ha municipal nature reserve in the Gauteng region which employs 58 staff. The reserve has various value-generating activities such as gate fees, overnight lodges, camping, fishing amenities, conference and venue hire, rentals, and a friends group who assists in certain capital projects in the reserve.

- **8PS: Interviewee 8**. Lodge manager and owner at a private lodge based in a 18000ha public/private partnership reserve in Gauteng. The lodge has 60 beds and employs about

48 staff members. The value-generating activities include weddings, conferences, adventure camps and game drives. The camp also provides educational initiatives and community upliftment programmes.

- **9GS: Interviewee 9**. A reserve manager at a 1500ha municipal reserve in the Western Cape area. The reserve can sleep 4 people in their one cottage, the main income is from the municipal government, gate fees (especially during the flowering season). Their expansion plans include adjoining a national park in the region. This reserve employs 11 staff members.

- **10GS: Interviewee 10**. A reserve manager who manages several municipal reserves in the Western Cape area, with some resorts under management. All the reserve areas employ 15 staff members. The resorts are mainly open to the public and do not charge entrance fees, as their main objective is to provide education to the adjoining low-income areas. The areas are mainly funded by the government and some income from the film industry and green initiatives.

- **11GS: Interviewee 11.** A biodiversity area coordinator for a region in the Western Cape. The interviewee is responsible for managing a municipal reserve and additional areas. The reserve's income is mainly generated through gate fees and some rental fees from the restaurant. Much of the reserve's expenses are covered by a lucrative friends group.

- **12SO: Interviewee 12**. An owner of a private tour operation running conservation type tours throughout Africa, which extends to the following locations: Serengeti, Ngoragora, South Luangwa, Chobe, Bagatu, Mahungu, Etosha, Okavango Delta, Kruger, all of the Natal Parks, Etala, Hluhluwe, Addo Elephant, Karoo, Tsitsikama, Fish River, and Kalahari. The tours visit private as well as public conservation areas and the business provides training tours to local and international schools. The company aims to attract 4000 tourists (pax) per year (12SO "hotels talk about bed nights, one person, one bed, one night is one bed night. We talk about pax stays, one person, one tour, one day… I have been trying to get to 4000") this establishment has been operational for 15 years.

- **13SO: Interviewee 13**. An owner of a supplier in the conservation tourism industry which provides booking services, marketing services as well as training to private resort managers. The main income generated by the company stems from providing management and hospitality training, and marketing expertise to industry professionals.

- **14GS: Interviewee 14**. A conservation area manager in a 24000ha conservation area, based in a biosphere reserve (managed by Cape Nature). The area revenue-generating activities include the rental of cottages, gate fees, and the film industry.

- **15PS: Interviewee 15**. An owner of a private conservation tourism initiative in a fynbos area. Income generation for this private organisation mainly includes the wine farm industry. The cottages, camping and conservation initiatives act as a secondary income generator.

Face-to-face semi-structured interviews were conducted with these stakeholders to understand the business environment they have to deal with and the planning practices they utilise to plan for this complexity.

3.5 Data analysis

The data analysis for both the quantitative and qualitative methods are discussed below.

3.5.1 Phases of analysing data

The following phases were utilised to analyse data: pre-processing; classification and indexes. Each stage of analysis relies on information generated during the preceding stage. The stages of analysis are detailed below.

3.5.1.1 Pre-processing

Pre-processing of the data included the cleaning of the quantitative data and the transcription of the qualitative interview data. After the in-depth interviews, all interviews were professionally transcribed to ensure the data is ready for analysis in a user-friendly format. Due to the nature of online data collection in a survey, some cleaning was required to use the data in the analytics software.

3.5.1.2 Coding

All qualitative data were coded in Atlas.ti for comparative purposes. The coding enabled the researcher to identify key concepts to be included in the framework. Quotes were selected to be highlighted in the analysis of the transcripts.

3.5.1.3 Indices, tables and graphs

Indices were developed from the quantitative data. Tables and graphs and visualisations to highlight critical points the quantitative data adds to the research results.

3.5.1.4 Analysis

The data were analysed in the selected tools, for the qualitative study this was done using the Atlas.ti version 8. Once coding was done, the quotes were qualitatively analysed to look for themes to inform the framework. The quantitative data were analysed in Tableau Version 10 comparing charts and descriptive statistics.

3.5.1.5 Synthesis

Once the data was individually analysed the results of both studies were synthesised to look for recurring themes and through the process identify the key categories to include in the framework development.

3.5.2 Quantitative research analysis

Data were analysed mainly using descriptive statistics and data visualisation. Because the study utilised survey methodology causal inference could not be made. The tools for analysis included Tableau version 10 desktop for data visualisation and analysis as well as R version 3.6 for statistical analysis. Tableau desktop is an analysis software that integrates the use of data in spreadsheets and data on servers and visualises the data (Tableau, *n.d.*). R statistics is an open-source programmable statistical package conduct all primary statistical analysis. The R language was accessed through R Studio version 1.2.

Data collected online was converted into an Excel spreadsheet and uploaded to the Tableau version and R analysis packages. The data required some conversion in both instances to ensure the packages were able to read and convert the data to visualisations and conduct statistical tests. Once imported the data was further converted to be able to compare the questions to each other in visual form.

Due to the Likert format of the data, it was important to visualise the results using descriptive charts. The primary method of output chosen as stacked bar charts. The colouration was chosen between shades of red for "very bad" or "extremely poor" as an indication of negative response. Yellow for a “neutral” response. Gradients of green indicated positive response "very good" and "very well managed.” The stacked bar charts were then compared to each other to make inference on the corresponding response.

Responses were grouped into demographic groups and compared to the responses in different demographic groups. Where the data indicated a definite difference in the demographics of a specific response this response was further analysed to indicate if such a difference is statistically valid using the Chi-Square test to understand the association. The chi-square test was only

conducted on results that indicated an association in the descriptive analysis. It has to be noted that an association does not imply causation (Radziwill, 2015). It also has to be noted that the sample was purposive and thus not random.

3.5.3 Qualitative research analysis

To establish trustworthiness in qualitative research analysis, Lincoln and Guba (1985) proposes that qualitative data need to pass the dependability, credibility, transferability and confirmability test. To ensure dependability the research process needs to be logical, traceable and clearly documented (Nowell *et al.*, 2017). Transcription of the interviews was professionally transcribed by transcription service providers. The transcription due to the length of the interviews as well as the number of interviews took a substantial amount of time. The transcriptions were provided in Word format. Certain comments were made in the respondents native language Afrikaans. These comments and interviews were transcribed by a professional native Afrikaans transcriber to insure authenticity. The native language quotes were included in the study in the native tounge.

The interview transcriptions were imported into Atlas.ti version 8 to analyse. As part of the research process, each interview was categorised according to type, size, and as public or private, these categories were kept consistent with the categories as published in section 3.4.2.1. The data were analysed in two ways. Firstly, the data were categorised and combined according to the questions so it could be analysed in the context of the topics discussed. Secondly, the data was imported into Atlas.ti version 8.4 for coding and analysis. At the time of the research, Atlas.ti is one of the preferred qualitative analysis tools (Barry, 1998).

Table 3.4: Codes and code groups as identified in Atlas.ti 8.4

Groups	Code Name	Count	Groups	Code Name	Count
Business Success	Number of Beds in Resort	7	Conservation, Social Issues	Conservation Issues	29
Business Success	Business Pressures	18	Conservation/Business	Main Objective Profit or Conservation	10
Business Success	Business Success	14	Conservation/Business	Tourist Interest Conservation Quality	5
Business Success	Capital Sources	8	Conservation/Business	Tourism/Conservation what funds what	18
Business Success	Client Satisfaction	13	Employees	Employees	10
Business Success	Entrepreneurship	4	Employees, Social Issues	B-BBEE	3
Business Success	Financial	22	Green	Recycling & Green Initiatives	11
Business Success	Income stream	79	Industry	Cooperation	27
Business Success	Key Success Factor	13	Industry	Customer Power	19
Business Success	Marketing	23	Industry	Government vs Private Areas	16
Business Success	Number Employees	8	Industry	Industry Attractiveness	23
Business Success	Return on Investment (ROI)	2	Industry	Industry Competition	33
Business Success	Struggling Conservation Area	6	Industry	Industry Growth	12
Business Success	Target Market	20	Industry	Industry Pressures	18
Business Success	Turnover of the reserve	7	Industry	Intermediaries	15
Business Success, Conservation/Business	Is conservation income generating	6	Industry	Supplier Power	23
Business Success, Industry	Social Media	32	Industry	Threat New Entry	12
Business Success, Industry	The Market	14	Industry	Threat Substitution	12
Business Success, Social Issues	Hunting	19	Macro	Economics	3
Conservation	Conservation Activities	36	Macro	Government Influence	16
Conservation	Conservation Objective	11	Macro	Instability	5
Conservation	Conservation Planning	7	Macro	Legislation	2
Conservation	Conservation Success Measures	14	Macro	Major Event (Black Swan)	5
Conservation	Ecosystem	6	Planning	Planning	54
Conservation	Tourism Impact	28	Resources	Destination	13
Conservation, Conservation/Business	Tourism and Conservation Management	13	Resources	Physical Location	7
Conservation, Employees	Conservation Employees	12	Resources	Resource Perspective	20
Conservation, Industry	Conservation vs Competition	16	Resources	Size Reserve	9
Conservation, Resources	Conservation Equipment	4	Social Issues	Education	12
Conservation, Social Issues	Community & Stakeholders	26	No Group	Centralised vs Decentralised	1

Source: Researcher's compilation

The thematic coding was done inductively, relevant keywords were allocated and then categorised. As presented in Table 3.4, a total of 60 themes were identified during the process. Some of these codes were allocated to ten code groups. During the process, a selection of quotes was identified that described the theme and provided answers to the semi-structured questions. Quotes were selected for these keywords and then analysed to address the research question. The analysis took into account the questions as posed in the qualitative semi-structured questionnaire (Appendix B). It is important to note that in strategy, the use of induction, analogy, judgment, and insight is required to deal with and make sense of the complexity (Rumelt, 2011). Well known frameworks were used to categorise, themes and research data as well as utilising the responses to address the usefulness of the key frameworks the research aims to address in Chapter 5.

Credibility is addressed by ensuring there is a fit between the interviewees' views and the researcher's presentation (Nowell *et al.*, 2017). To ensure credibility, comprehensive use was made of direct quotations from the interviewees in their original form. Credibility is also achieved through the supervision process through peer debriefing. Transferability can only be determined by the reader, but, the researcher set out to categorise the research findings in a format that may aid the reader to do so with greater ease. Confirming that the researcher's findings are clearly derived from the data happens when credibility, transferability and dependability have been achieved (Nowell *et al.*, 2017).

3.5.4 Mixing the results through synthesis

Synthesis, according to the Cambridge dictionary (2018), is “the act of combining different ideas or things to make a whole that is new and different from the items considered separately.” Synthesis is also the last step in Hegel’s Dialectic. The notion of dialectic is the notion of thesis-antithesis-synthesis or problem-reaction-solution. Buckingham *et al.* (2011) state that “In Hegel’s view, a synthesis emerging from antagonism of thesis and antithesis itself becomes a new thesis, which generates its own antithesis – which finally gives birth to another synthesis. This dialectical process is one in which the Spirit comes to ever more accurate understandings of itself – culminating in the philosophy of Hegel in which it achieves complete understanding.”

As proposed by Hegel the ever-evolving road to understanding happens when we set a thesis or challenge an issue, analyse it to understand it through critical thinking. We then synthesize our learnings into a new understanding. Testing our understanding that we just gained again through the second wave by questioning our new understanding, and synthesising the results. The results of the combination of the studies are the synthesis of the analysis or antithesis, which was the questioning of the understanding proposed in the initial phases of the study. This synthesis aims to deliver an understanding of the subject holistically.

Systems theory and specifically the Causal loop diagram provides a way in which we can synthesise the data and analysis we have constructed in a clear model giving an overview of the situation with its necessary details. According to Maani (2016:27), a CLD is a simple yet eloquent tool to map relationships and how they impact each other even uncovering complex interconnections. According to Maani variables that are in the model can be concepts, decisions, actions, conditions, policies. It can be quantitative measures like assets, cash flow, staff size, GDP and stock of fish but it can also be qualitative variables like trust, fear and morale making the causal loop diagram the ideal tool to synthesise the mixed method approach in this study.

The first activity when using CLD's is to uncover the variables. The variables can be uncovered in various ways from brainstorming through to pure quantitative measures. In this study, the variables were uncovered through analysis of the quantitative and qualitative studies. Key variables were identified and grouped where possible to reduce the complexity. The variables were then placed in an online mapping tool called Kumu.io (Kumu, 2018).

Kumu (2018) describes their service as follow "Kumu is a powerful data visualisation platform that helps you organise complex information into interactive relationship maps." The CLD was then populated with interconnections and feedback loops to identify network connections and feedback in the system. Positive and negative relationships between variables were identified but not added

in the final CLD following the example of Maani (Maani, 2016: 155), firstly to limit the complexity and secondly, as further research may be needed to confirm their validity. Delays are a crucial variable in the systems map and were mapped to show how they will affect the overall interaction.

Once the mapping was complete, the objective was to identify critical points of resistance and stability. The researcher identified where there was balance in the system and where there was reinforcing loops at work. Identifying a causal loop as reinforcing or balancing does not indicate a positive or negative situation. Some balancing loops can be positive or detrimental to the business. Finally, we uncovered areas where we could apply leverage to affect the system.

3.6 Ethical considerations

Ethical guidelines relevant to quantitative surveys and qualitative interviews were followed. An ethics application was submitted to the University of South Africa (UNISA) in January 2015. Research approval was granted, requiring all respondents in the qualitative study to complete an informed consent before the face-to-face interviews (2015/CAES/032). Informed consent was requested from all participants before taking part in the study and provided to the UNISA ethics committee as requested. Participation in the study by respondents was voluntary. Confidentiality agreements were respected and only aggregated data published.

3.6.1 Quantitative research ethics

3.6.1.1 Online survey anonymity and consent

Respondents were supplied with the option to view the terms of taking part in the survey via an online link at the start of the survey. By clicking start in the online survey, they provided consent to take part in the survey. The ethics statement indicated the anonymity of the survey and that taking part is voluntary. It was also communicated that the survey was analysed at an aggregate level.

3.6.1.2 Data management and storage

Data was collected in a password-protected environment. Only anonymised data was shared with third parties. The researcher conducted the data analysis with some help of third parties but only using anonymised data.

3.6.1.3 Publication

Only anonymised data was published with no mention of any of the respondent's personal information.

3.6.2 Qualitative research ethics

3.6.2.1 Consent forms

Consent forms were provided to each respondent as per the ethics requirements indicated by UNISA ethics department. Examples of the completed ethics documentation were submitted to the UNISA ethics department. Each respondent taking part in the semi-structured face-to-face interview received an explanation of the content of the ethics document as well as a copy of the consent form to complete. All respondents completed and signed the consent form of which an example is attached in Appendix A

3.6.2.2 Data management and storage

Third-party transcriptions were done on the interviews. The recordings of the interviews were not shared further than this. Further analysis was conducted on the interviews in Atlas.ti in the Word form. The researcher conducted the analysis.

3.6.2.3 Publication

Data were anonymised for publication to ensure that the respondents and their corporations could not be identified.

3.7 Learnings from the research method

Developing instruments, data collection and analytical methods to answer the research question delivered some learning. The learnings are structured to present weaknesses and strengths of the phases.

3.7.1 Mixed method research approach

The overall integrated mixed method study provided some learnings for future consideration.

3.7.1.1 Weaknesses

The study cannot prove causality, the correct research method to infer causality will be an experiment. The study method was however chosen to develop a framework which requires a multi-faceted approach to deliver. The mixed method provides an advantage in complex situations in which this topic is one. To prove causality of the various elements future studies could be conducted to test the linkages.

Utilising a tested and calibrated research tool for the quantitative part of the study has very definite advantages. It has some disadvantages including the inflexibility of the tool. To be able to stick to the general design and the layout of the survey tool we compromise some flexibility to measure more directly related aspects to the qualitative segment informing the QUAL(quan) concurrent research design.

In a sequential research design, we could have developed some of the qualitative research questions into the quantitative measure to inform the study. There are two ways in which this could have been done firstly through general public research questionnaires measuring some aspects highlighted in the qualitative study or a quantitative study with stakeholders.

In a sequential research design where the quantitative survey informs the qualitative, some issue could have been highlighted in the quantitative questions and the why discovered in the qualitative study that follows the quantitative section. The fact that insufficient knowledge on the broad understanding of public perceptions in environmental issues exists made it essential to understand the sizeable external environment to be able to build a strategic framework that will work in such an environment.

3.7.1.2 Strengths

The strength of the approach taken to include the exceptionally comprehensive way in which the New Zealand validated quantitative study has been developed over 15 years (Hughey *et al.*, 2004; Hughey, Kerr and Cullen, 2016). The availability of baseline results to help inform the research will help give a clear indication of the environmental variables that affect the strategic framework.

The concurrent way in which the study was conducted enabled the efficient use of resources. The inclusion of the quantitative study as a factor that informs the qualitative study provides an added strength to the qualitative results. It provides a way to measure the outcomes of the framework development and proves a holistic understanding of the broader environmental issues and what variables would influence the general public to take action on environmental issues and the role of conservation areas in this endeavour.

3.7.2 Quantitative research section

The quantitative phase delivered the following learnings to be considered for future studies.

3.7.2.1 Weaknesses

Utilising a pre-tested and existing survey tool has advantages but also has the disadvantage of being relatively set, limiting the number of questions designed specifically for the research project.

While the online survey provides a global overview of the environmental perceptions, it fails to ask specific questions about the conservation areas and the strategy subject considerations. Due to this, the decision was made to make the quantitative survey of secondary importance, providing information to assist in the understanding of the qualitative results which forms the central part of the study.

The study included the use of social media – a relatively new method of data collection as well as email and face-to-face tablet data collection. The data collection method and opt-in method limited the option to control of race profile of the respondents compared to general South African statistics.

3.7.2.2 Strengths

Using a study conducted in New Zealand, *Public Perceptions of New Zealand's Environment: 2016* has provided some benefits. Using the study to compare to South Africa provides a baseline from which we can draw an inference. It provides a research tool that has been proven and which results have been measured. The New Zealand study was also conducted online which assures that the tool is ready for online usage.

The demographic profile of the respondents who opted in to take part in the research has similar characteristics than the typical nature-based tourist demographics which assists in making this study representative of the opinion of the typical domestic tourist, nature-based tourist or visitor of SANParks.

The Social media data collection method provided an excellent response. Respondents who conducted the research shared it with their friends and asked them to assist with the study. The referral resulted in an increased response which in turn provided the opportunity to reach respondents from all over South Africa.

The quality of the data collected was clean and ready for analysis. Only slight changes were done to code the data and ready it for analysis. The number of responses also provided validity to the results of the analysis.

3.7.3 Qualitative research section

The qualitative study delivered the following learnings for future studies.

3.7.3.1 Weaknesses

Face-to-face interviewing requires being at the conservation area and meeting in person. To enable the study to have a national footprint meant getting a diverse group of conservation areas in different areas. One interview was conducted via conference call, but the voice quality was poor which influenced the transcription. The researcher moved between provinces during the data collection period which put a strain on the timelines but had the positive effect of giving access to new conservation areas.

Due to the length of a 1-hour interview, the transcription cost was high and the amount of time taken to transcribe a document was substantial. The first transcriptions received was of poor quality, and a new transcription supplier was used. Furthermore, language barriers proved to be challenging as some of the respondents interviewed did not have English as a first language and preferred to converse in Afrikaans.

Not all public park authorities took part in the study. Future studies could expand the scope of the research to include a broader selection of public conservation areas.

3.7.3.2 Strengths

A strength of the study was that getting an excellent understanding of the range of diverse perspectives of different conservation areas and companies in detail. The interviews highlighted the need for research to be conducted on the insufficient management knowledge some respondents had.

The qualitative study highlighted apparent shortcomings in the current state of affairs. It indicated clear divides in thinking between the management of the conservation areas and the tourist managers in the conservation areas.

The study included some multi-country conservation management areas. These provided a very good indication of conservation and management issues experienced on the African continent. Some senior management to some of the conservation areas and conservation management companies were interviewed providing some critical insights into the strategic management practices and lack there off.

Conducting the central part of the research as qualitative enabled the study to include some other sources besides the interviews such as the management reports of conservation areas. It provided the opportunity to include National Parks in the study as the park management reports are open to public access.

3.7.4 Future research considerations

Due to the research method used as indicated above causality between the linkages in the systems framework could not be established. Future studies could be developed to test the linkages and the causality between the different facets highlighted in the study.

Further research should look at ways to ensure an equitable response and ensure financial resources to tap the rural opinion in the quantitative environmental perceptions study. Although this study included 200 such rural respondents, it was disproportional to the urban responses.

Due to the constraint to the number of questions and the decision to make the quantitative study comparable to the New Zealand study the depth of the study was limited. An in-depth look into the tourist side of conservation and tourist specific responses will add to the knowledge gained. A further questionnaire could be developed, and the subsequent New Zealand study that followed the South African study included such an add-on.

The study aimed to look at a broad selection of conservation areas including public and private. This objective was achieved by including provincial, municipal conservation and private conservation concerns as well as key stakeholders that interact with these conservation concerns. Future studies could be expanded to include a broader selection of conservation areas.

3.8 Summary

The study utilises a qualitatively driven mixed method approach QUAL(quan). The quantitative and qualitative elements are synthesised utilising a systems thinking approach to deliver a strategic framework for conservation areas. The research survey instrument for the quantitative study of environmental perceptions was developed and validated by Hughey, Kerr and Cullen (2004; 2016) for New Zealand, and adapted for the South African environment. The qualitative study utilised semi-structured face interviews to develop an understanding of the conservation tourism industry, management and planning approaches.

The quantitative survey was completed by 1327 South African respondents. The results of the study were analysed using Tableau version 10 as well as R version 3.6 statistical software. The qualitative study included 1-hour interviews with stakeholders in the conservation tourism industry, which was analysed using Atlas.ti version 8. Finally, an inductive systems thinking approach was utilised to synthesize the study results to develop a framework for the strategic management of conservation areas.

This chapter provided an outline of the research design and the method utilised to collect as well as analyse the data. Chapter 4 provides an analysis of the quantitative study of environmental perceptions.

CHAPTER 4: RESULTS ON ENVIRONMENTAL PERCEPTIONS

"Bounded rationality means that people make quite reasonable decisions based on the information they have. But they don't have perfect information..." ~ Donella Meadows (2009: 106)

4.1 Introduction

The Global state of the environment has declined and received much attention over the years. A holistic analysis was conducted of the South African environment through a quantitative, tested and verified environmental perceptions survey (Hughey *et al.*, 2004). In total 1327 respondents took part in the survey in 2016 and early 2017. The study has been conducted since 2000 in New Zealand, utilising the New Zealand study provides a unique opportunity to compare the South African results with the New Zealand data as a baseline. The South African study was compared to the 2016 New Zealand study results (Hughey, Kerr and Cullen, 2016).

The study informs us of the general perceptions of the South African population on a broad range of environmental issues. The perceptions can be measured against the latest environmental data and management thinking. The conservation management strategy needs to take into account the general population perceptions to understand the business and environmental milieu it operates in to frame management decisions and deliver on conservation and financial performance targets. Measuring where the response differs from the generally accepted data provides behavioural insights to develop strategic models as well as developing plans for education and exploring other opportunities.

The study follows the Organisation for Economic Co-operation and Development (OECD) pressure-state-response model utilised in the original research instrument that was developed and validated by Hughey, Cullen, Kerr and Cook (2004). First, the findings indicate the current state of the natural environment in South Africa as perceived by the respondents.

4.2 The state of the environment

The study first rates the overall state of the South African environment presented in Figure 4.1 and 4.2. This is done through the use of four statements rated on a Likert scale from 'very bad' to 'very good' to measure respondents' perceptions of their knowledge on environmental issues, the overall standard of living in the country, the overall state of the environment and if South Africa is clean and green.

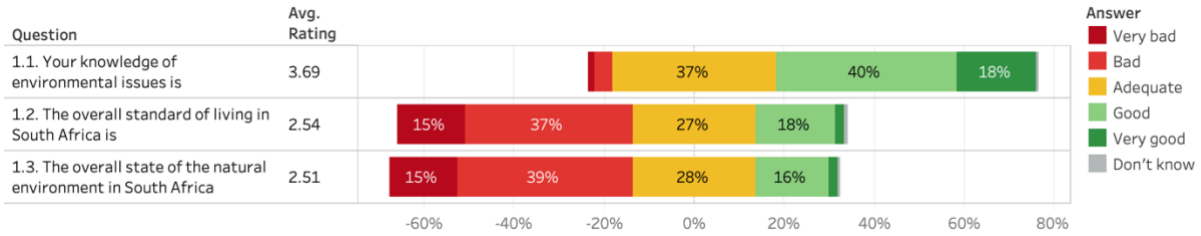

Figure 4.1: Overall state of South Africa's environment

Source: Researcher's compilation

When respondents were asked about their knowledge of the environmental issues, presented in Figure 4.1, 57.7% indicated their knowledge is good or very good and 36.6% indicated they have adequate knowledge. 94.3% thus indicated they have an adequate and higher knowledge of the environment, much higher than New Zealand, where the perceived knowledge higher than adequate was 91.8% (Hughey, Kerr and Cullen, 2016). This perceived knowledge has proven to be correlated to the education levels of the respondents. The more educated, the higher the perceived knowledge (Chi-Square p-value 2.2e-16).

How people experience, the overall standard of living in South Africa is similar to how they perceive the overall state of the environment, predominantly negative (52.2%) compared to 27.3% describing it as adequate and 19.7% indicating the living standards in South Africa are good or very good, totalling up to 47%. New Zealanders here were much more positive with 87.7% (Hughey, Kerr and Cullen, 2016) indicating adequate and higher living standard compared to 47% in South Africa.

The respondents (53.7%) indicated that the overall state of the South African environment is either bad or very bad. If we compare the negative response to the New Zealand study during the same period, the negative response in New Zealand came in at 24.7%. The overall positive response, including respondents who indicated it is adequate in South Africa, was 45.5% compared to the New Zealand study at 73.8%. Although South Africans were more positive about their environmental knowledge, they were much less favourable than the New Zealand counterparts on the environment (Hughey, Kerr and Cullen, 2016).

To understand if the overall perceived standard of living in South Africa is dependent on the overall state of the natural environment, a Chi-Square test of independence was conducted. The test of independence with a significance level of 0.05 resulted in the rejection of the null hypothesis with a p-value of < 2.2e-16 (a very high level of significance). How respondents feel about the overall state of the environment does align strongly with how they perceive the overall living standard in the country to be.

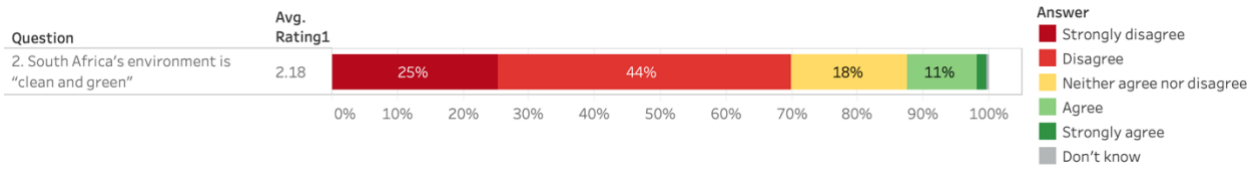

Figure 4.2: South Africa's environment is not clean and green

Source: Researcher's compilation

Figure 4.2 indicates that only 12% (10.6% agree +1.4% strongly agree) of South Africans responded positively to this question "is the South African environment clean and green?", compared to 35.7% in New Zealand (Hughey, Kerr and Cullen, 2016). The majority (69.8%) of the respondents indicated they either disagree or strongly disagree with this statement. A test of independence was conducted to measure if the perceptions of the South African environment are aligned with the overall perceptions of the standards of living in the country. As in the "overall state of the natural environment", the null hypothesis in the "South Africa's environment is clean and green" was rejected with a p-value of < 2.2e-16 indicating a high level of significance that the two variables are not independent. How people feel about the "clean and green" of the environment does align with their perceptions of the standard of living.

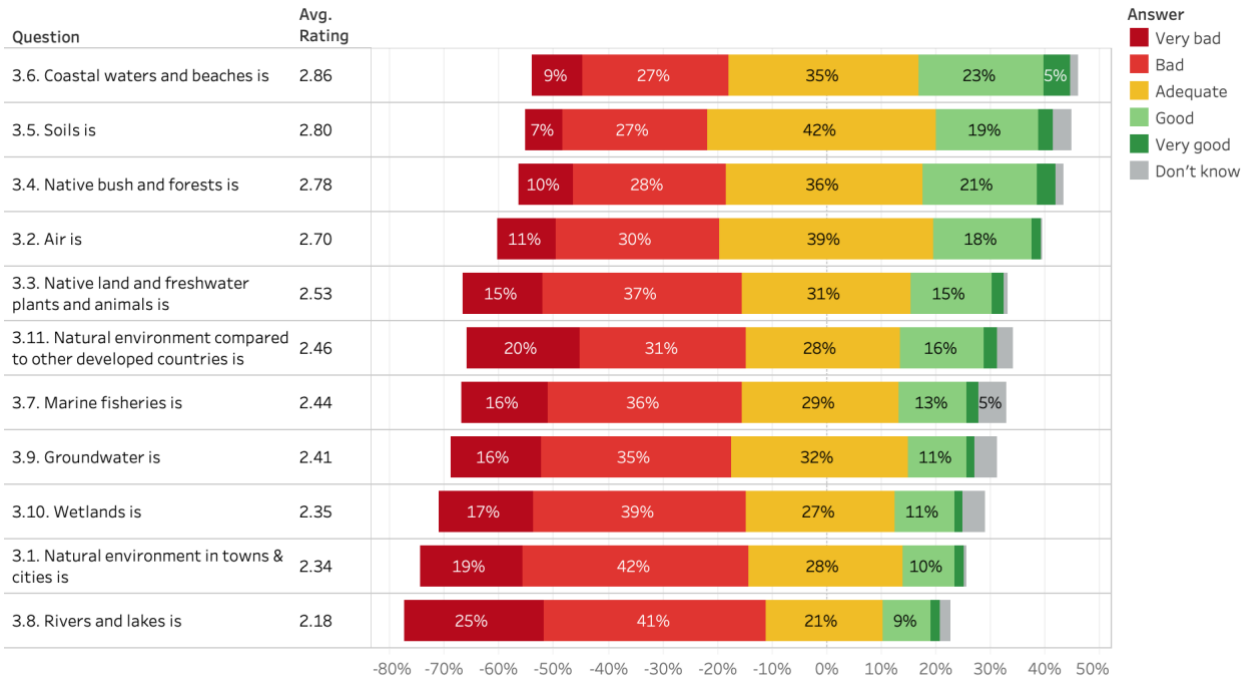

Figure 4.3: Condition of South African environment

Source: Researcher's compilation

Participants were asked ~ Please indicate what you think the condition of each of the following is, regarding various aspects of the South African environment. A Likert scale ranging from very

good to very bad was used for this question. Figure 4.3 indicates that the respondents were most positive about the soils at 62.9% at least an adequate response. The high don't know rating of 3.5%, as well as the high adequate rating, may indicate that respondents were unsure. Coastal waters and beaches were second at 62.7% if the adequate rating was included, but due to the larger good to very good rating was ranked first. Native bush and forests were third with a moderate to the high rating of 60.3%, compared to New Zealand at 78.6% (Hughey, Kerr and Cullen, 2016).

Rivers and lakes and natural environment in towns and cities scored worst with an unfavourable rating of 66.3% and 60.2% respectively. Compared to the South African respondents, the New Zealand respondents were more positive about their local environment, with the natural environment in towns and cities scoring 78.7%. In New Zealand rivers and lakes scored the most negative at just above 40%, at 66.3% the South African rating is substantially lower than New Zealand. Interestingly the air quality scored highest in New Zealand compared to other measures (Hughey, Kerr and Cullen, 2016).

The air ratings had an adequate to high perception of 58.9%, followed by a negative perception of 40.8% (Bad and very bad). Native and freshwater plants and animals also had a high unfavourable rating at 51.2%. Marine fisheries had an unfavourable rating of 51.5%. Groundwater had a 50.2% unfavourable rating. Split in half with respondents indicating negative results and half indicating a positive result. Wetlands received a more negative rating at 56.3%, indicating a negative perception of the current state of wetlands.

Respondents were also asked to compare the environment to other developed countries. 51.2% of respondents had a negative perception of the South African environment compared to other developed countries. The balance of the respondents found the environment adequate to very good compared to other developed countries. Overall, it is clear that the respondents perceive the South African (mean = 2.53) natural environment substantially less positively than New Zealand (mean = 2.74) citizens (Hughey, Kerr and Cullen, 2016). The space allocated to conservation was also measured.

4.3 Space allocated for conservation

The space allocated to conservation is critical to not only ensure habitat for wildlife but also deliver on biodiversity targets. The Aichi 11 target is directly related to the space allocated to protected areas. Signatory countries are required to allocate 17% of their land as protected areas (CBD, 2011).

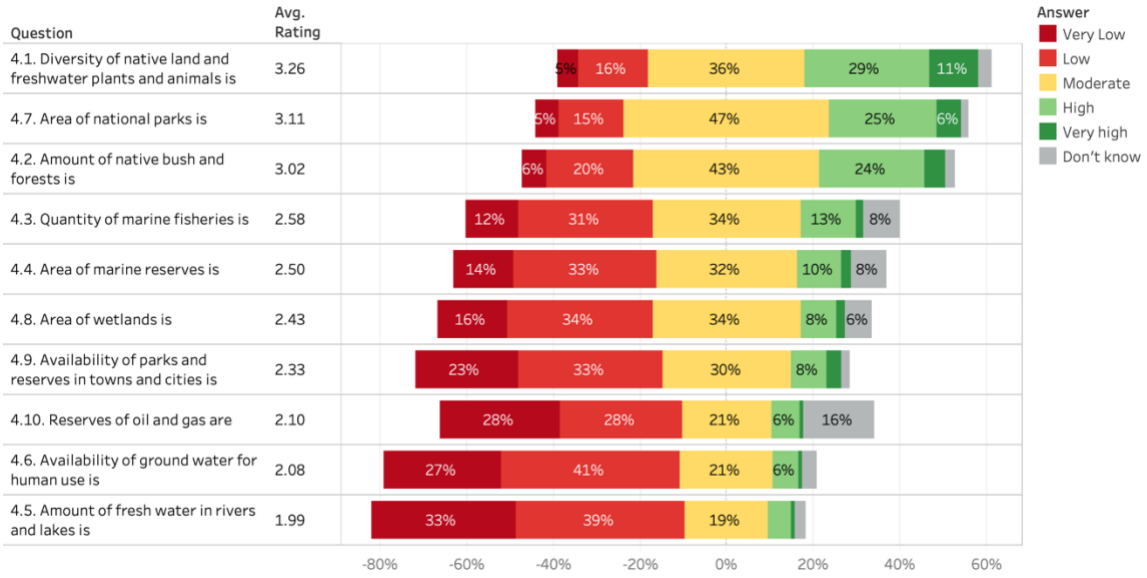

Figure 4.4: Space allocated to conservation

Source: Researcher's compilation

What is immediately apparent in Figure 4.4, is the number of respondents who indicated that the amount of land allocated to National Parks is moderate (47.4%) is very high a further 30.4% of respondents indicated high and very high, totalling 77.8%. The perceptions of respondents are not aligned with the fact that South Africa falls well short of the Aichi 11 target of 17% at only 7.8% protected area space (CBD, 2018). Consistent with the fact that South Africa has high biodiversity, the diversity of native land and freshwater plants and animals scored the most positive (39.9% High and Very High) but due to a lower moderate totalled 76%. The amount of native bush and forest came in with a sizeable moderate to a positive response at 68.8%.

The number of marine fisheries and area of marine reserves had a high don't know component at 8%, with a moderate to a high component at 48.5% and 44.7%. However, both the marine questions yielded a high negative response of 43% and 46.9%. The New Zealand respondents found the number of Marine fisheries the most negative but compared to South Africa; it was a lot less negative at 24.7% (Hughey, Kerr and Cullen, 2016). Respondents were the most negative about water in rivers and lakes (72.3% negative) as well as the availability of groundwater for human use (68.3% negative).

The area under the management of wetlands yielded a high negative response of 49.5%, as well as a, don't know the component of 6.3%. Availability of parks and reserves in towns and cities showed a 56.6% negative response with most respondents indicating they are not happy with the amount of land allocated to parks and reserves in cities. Only 14.2% of New Zealand respondents gave a negative response to this question. Overall the New Zealand (mean = 2.91) respondents

were more positive about the space allocated to conservation compared to South Africa with a mean of 2.54 (Hughey, Kerr and Cullen, 2016).

What is apparent is that the majority of respondents perceive the land allocated to national parks as well as native bush and forest is at least moderate to high. Their perceptions of the condition of these two areas are also rated above other environmental aspects. It is crucial to understand how respondents perceive the pressures on these environmental areas.

4.4 Pressures on the environment

The study of environmental perceptions measured the respondents' perceptions of the pressures on the environment. The question was formatted according to a Likert scale, rating responses from very bad to very good.

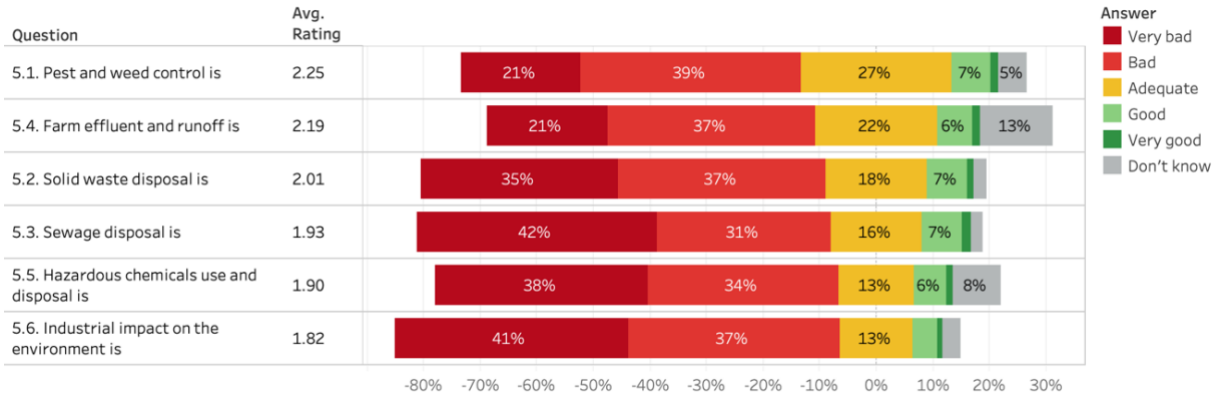

Figure 4.5: Pressures on the environment

Source: Researcher's compilation

Figure 4.5 indicates that waste management in South Africa received meagre ratings, and perceived management of waste processes are very low. The lowest of these is the rating for the industrial impact on the environment with a 78.6% unfavourable rating. This same rating in New Zealand also received a high negative score (50.2%) but not to the same extent as South Africa (Hughey, Kerr and Cullen, 2016). All the ratings were substantially negative with the best being Farm effluent at 58% negative response. This question also received the highest don't know at 12.8%. A high percentage of respondents have marked farm effluent and runoff as adequate (22%). Solid waste disposal received a 71.5% unfavourable rating in South Africa compared to our New Zealand counterparts at 37.1%. Sewage received a 73.1% negative rating compared to 27.8% in New Zealand (Hughey, Kerr and Cullen, 2016). Finally, Hazardous chemicals use and disposal was no exception with a 71.2% unfavourable rating.

4.5 Causes of environmental damage

The study investigated the respondents' perceptions of the causes of environmental damage. It covered ten main categories including air; native land, fresh water and plants; native forests and bush; soils; beaches and coastal waters; marine fisheries; marine reserves; fresh water; national parks and wetlands.

4.5.1 Air

Figure 4.6 presents the causes of environmental damage to air, as perceived by the respondents.

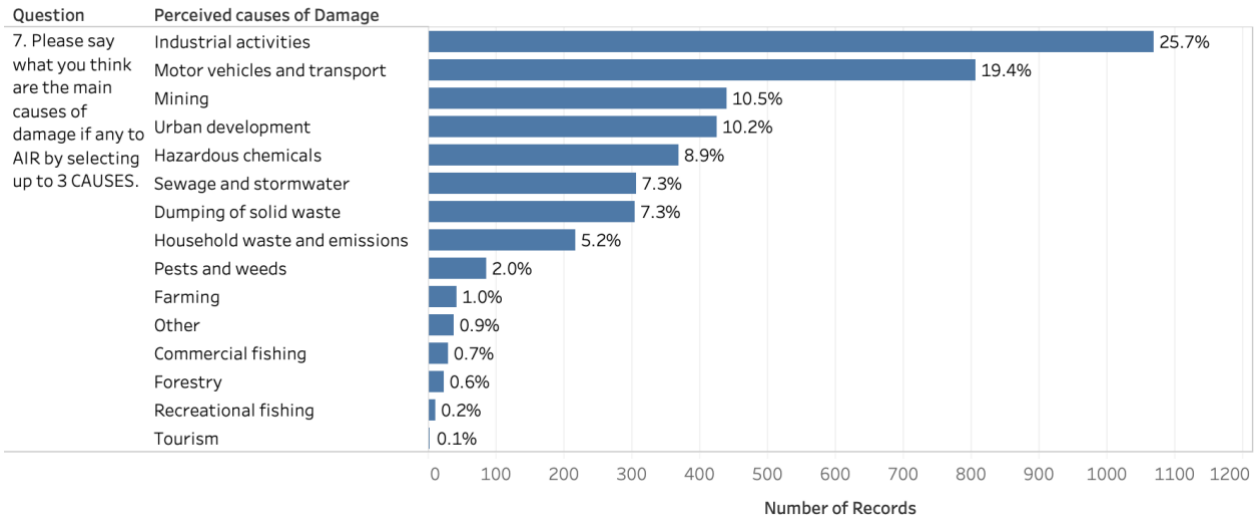

Figure 4.6: Causes of damage to air

Source: Researcher's compilation

Respondents were asked to rank the top three causes of air pollution. The results indicate that most respondents (25.7%) see industrial activities as the leading cause of air pollution. The second leading cause according to the respondents is due to motor vehicles and transportation (19.4%). Mining (10.5%); urban development (10.2%) and hazardous chemicals (8.9%) were seen as the next most significant variable in air pollution.

4.5.2 Native land, fresh water and plants

Figure 4.7 presents the causes to the environmental damage to native land, fresh water and plants as perceived by the respondents.

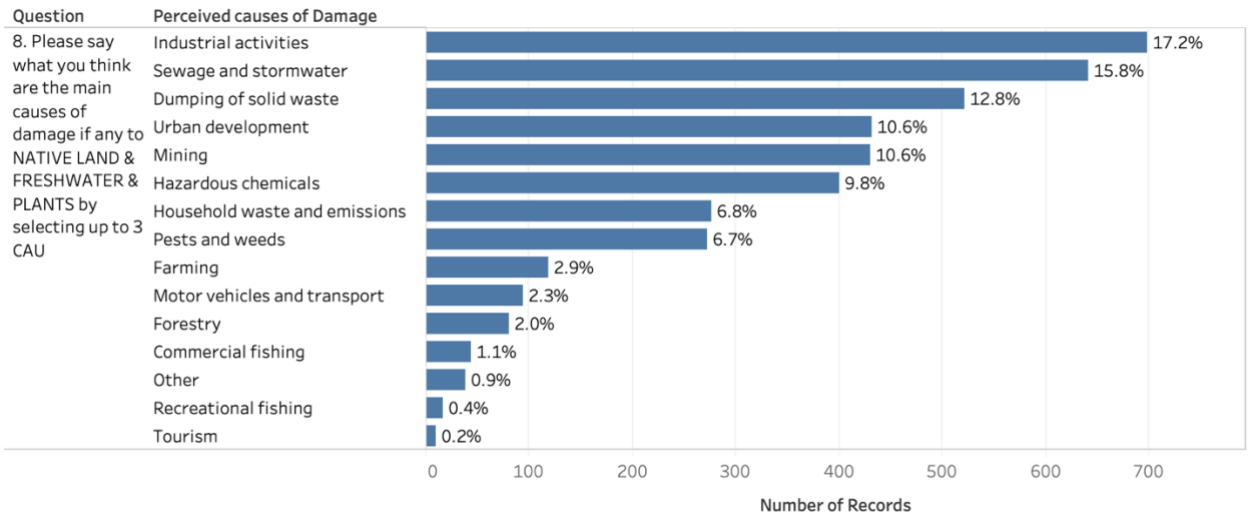

Figure 4.7: Causes of damage to native land, freshwater and plants

Source: Researcher's compilation

Looking at the perceived damage caused to native land and freshwater and plants the leading causes as perceived by the respondents are industrial activities (17.2%) and sewage and stormwater (15.8%). Dumping solid waste (12.8%) was perceived to the third cause. The next leading causes included urban development (10.6%); mining (10.6%) and hazardous chemicals (9.8%).

4.5.3 Native forests and bush

Figure 4.8 presents the causes of environmental damage to native forests and bush, as perceived by the respondents.

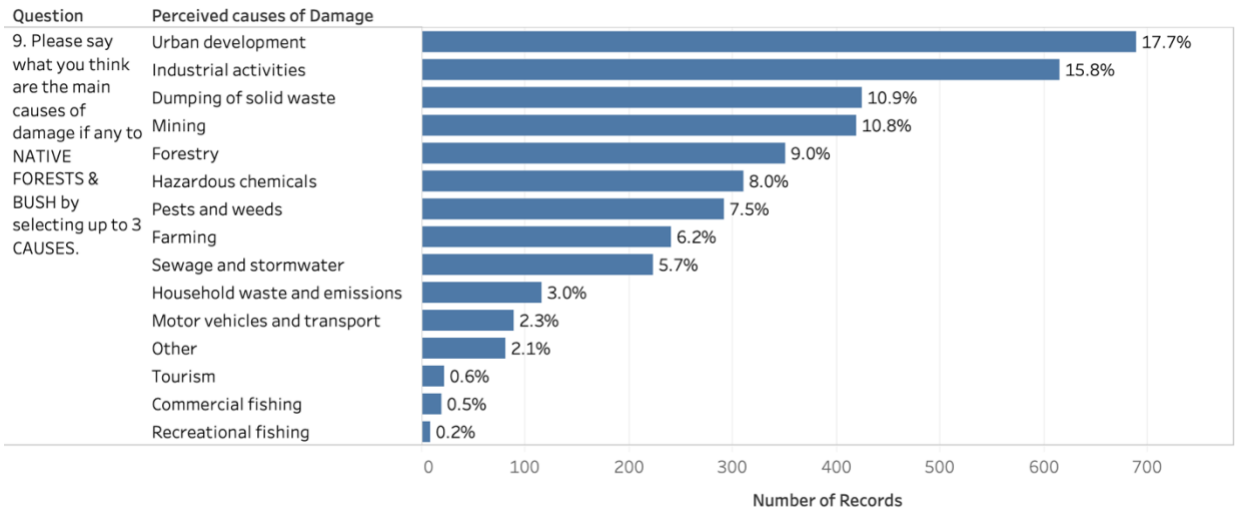

Figure 4.8: Causes of damage to native forests and bush

Source: Researcher's compilation

As the leading causes of damage to the native forests and bush were urban development (17.7%) were sighted followed by industrial activities at 15.8%. Dumping of solid waste (10.9%) and mining came in next at 10.8%. What was interesting was that only 6.2% of respondents perceived farming to be a cause of damage here. A meagre 0.6% of respondents felt that tourism impacted on native forests and bush.

4.5.4 Soils

Figure 4.9 presents the causes of environmental damage to soils, as perceived by the respondents.

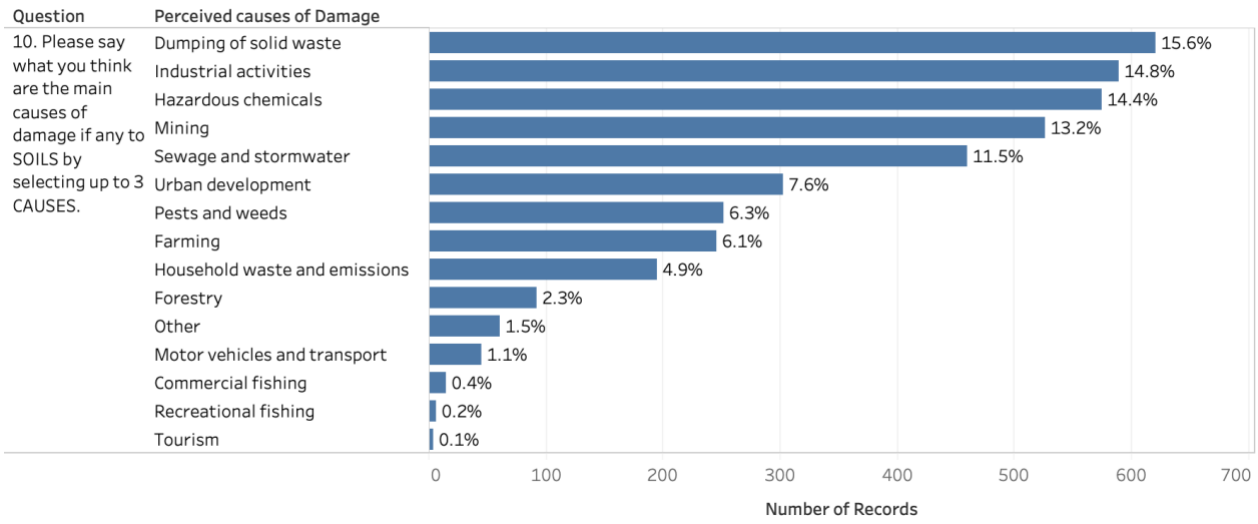

Figure 4.9: Causes of damage to soils

Source: Researcher's compilation

As causes of damage to soils, the leading causes as perceived by the respondents were very close. Dumping of solid waste (15.6%); industrial activities (14.8%); hazardous chemicals (14.4%); mining (13.2%) and sewage and stormwater (11.5%) were perceived to be the leading causes of damage.

4.5.5 Beaches and coastal waters

Figure 4.10 presents the causes of environmental damage to beaches and coastal waters, as perceived by the respondents.

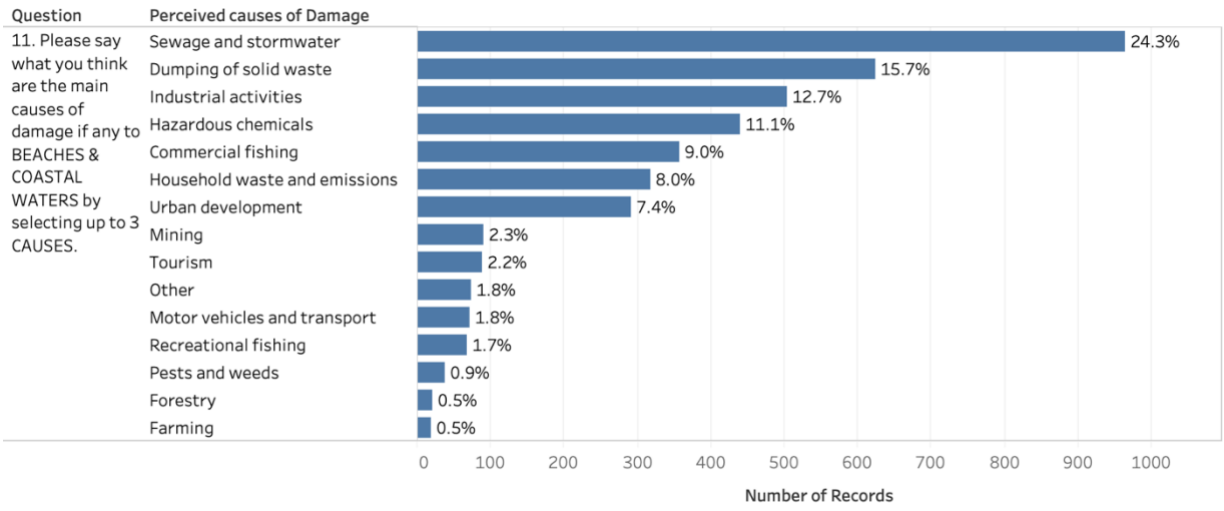

Figure 4.10: Causes of damage to beaches and coastal waters

Source: Researcher's compilation

The leading cause of damage as perceived by the respondents was sewage and stormwater (24.3%). Dumping of solid waste and industrial activities was also seen as leading causes at 15.7% and 12.7% respectively followed by hazardous chemicals (11.1%).

4.5.6 Marine fisheries

Figure 4.11 presents the causes of environmental damage to marine fisheries, as perceived by the respondents.

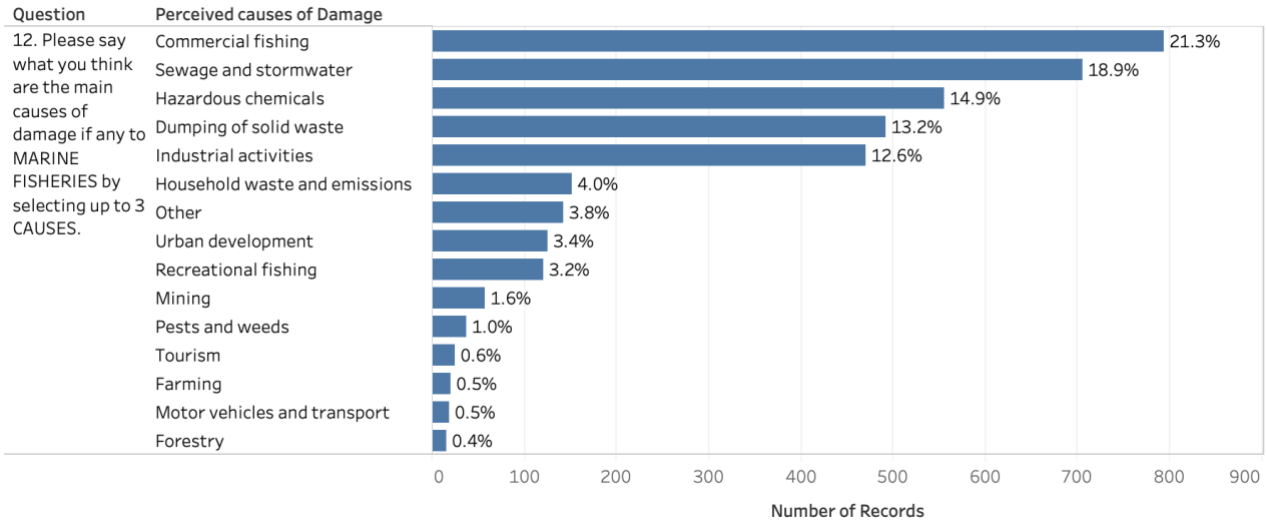

Figure 4.11: Causes of damage to marine fisheries

Source: Researcher's compilation

Damage to the marine fisheries was perceived to be mainly caused by commercial fishing (21.3%) and sewage and stormwater (18.9%). This followed by hazardous chemicals (14.9%); dumping of solid waste (13.2%) and industrial activities (12.6%).

4.5.7 Marine reserves

Figure 4.12 presents the causes of environmental damage to marine reserves, as perceived by the respondents.

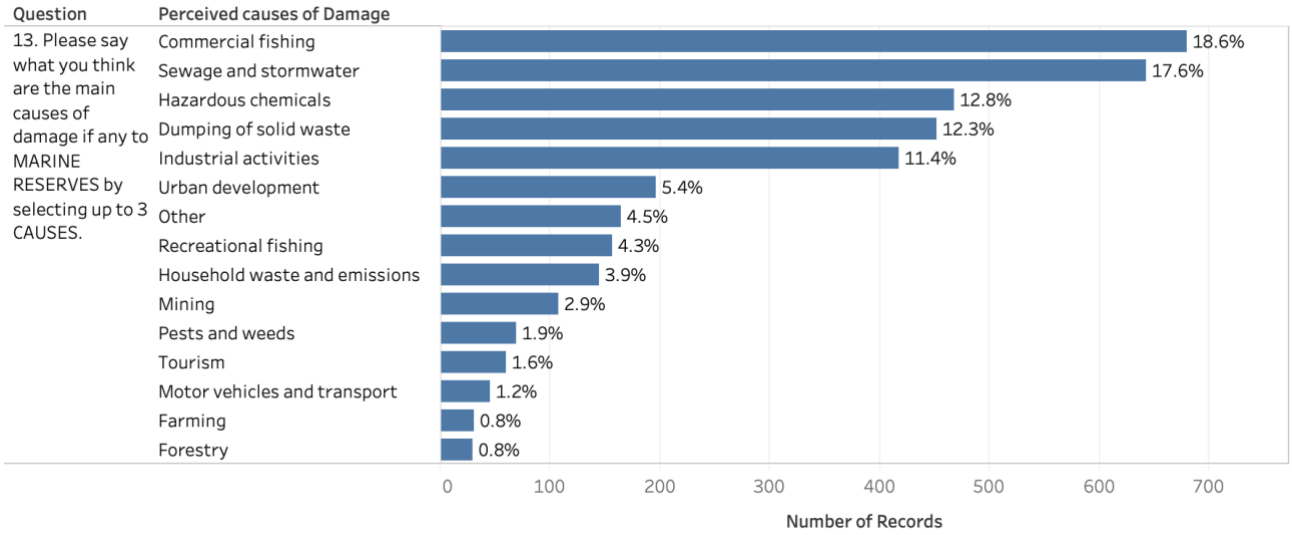

Figure 4.12: Causes of damage to marine reserves

Source: Researcher's compilation

The leading causes of damage to marine reserves were perceived to be commercial fishing (19%) and sewage and stormwater(18%), followed by hazardous chemicals(13%); dumping of solid waste(12%) and industrial activities(11%).

4.5.8 Fresh waters

Figure 4.13 presents the causes of environmental damage to fresh waters, as perceived by the respondents.

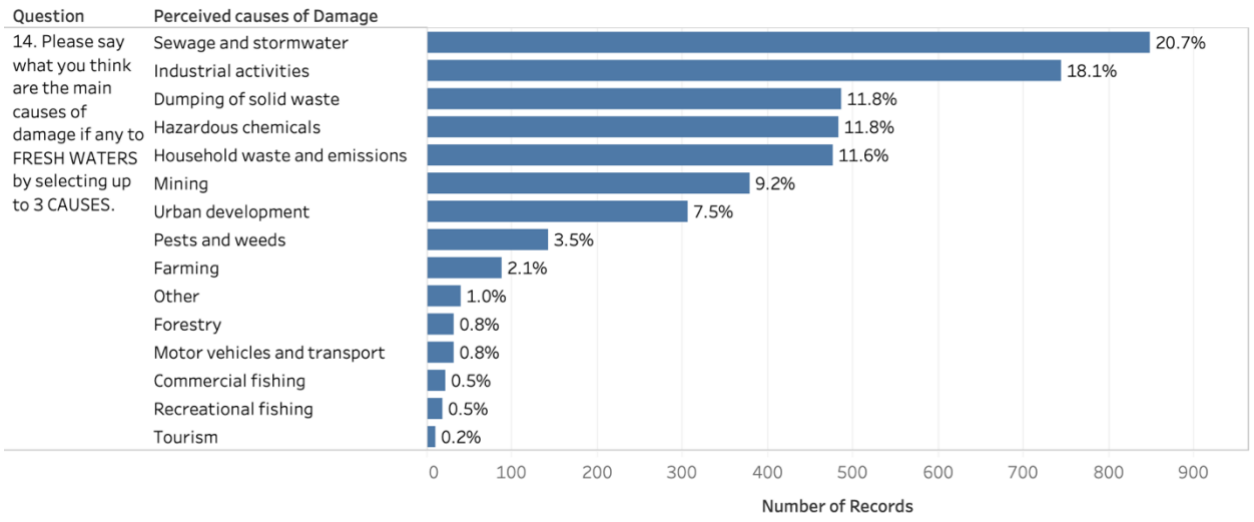

Figure 4.13: Causes of damage to fresh waters

Source: Researcher's compilation

Damage to freshwater was mainly perceived to be sewage and stormwater (20.7%) and industrial activities (18.1%). Dumping solid waste (11.8%); hazardous chemicals (11.8%) and household waste and emissions (11.6%) was seen as the next leading causes. What is interesting is that farming received a meagre rating at 2.1%. Respondents did not seem to link the problem of Nitrogen runoff from farming to the damage to freshwater bodies.

4.5.9 National parks

Figure 4.14 presents the causes of environmental damage to national parks, as perceived by the respondents.

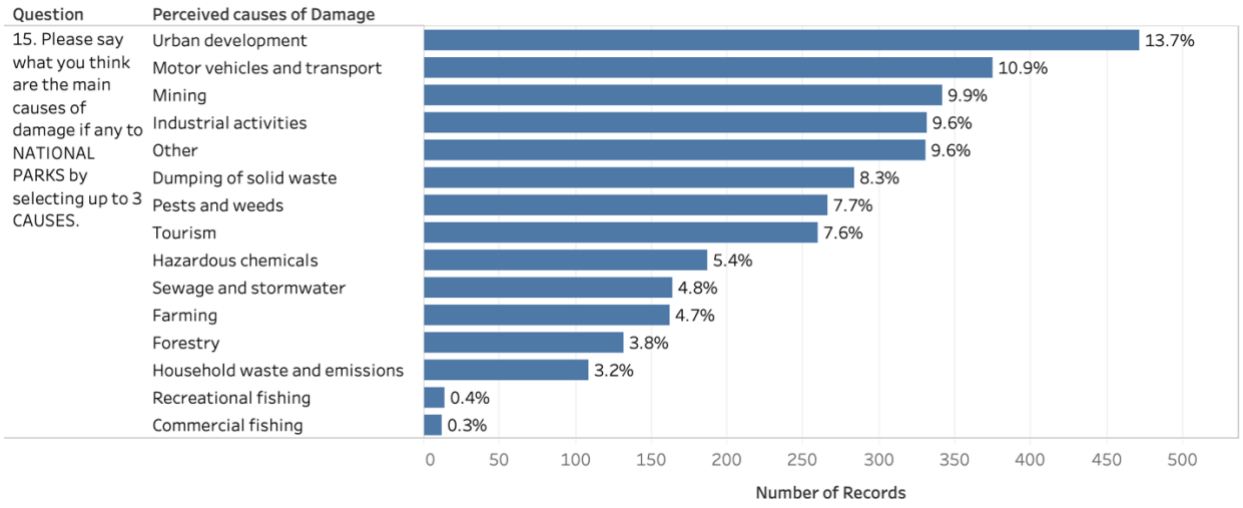

Figure 4.14: Causes of damage to national parks

Source: Researcher's compilation

Respondents were asked to rank the top three causes of damage to National Parks, and respondents perceived the leading cause to be urban development at 13.7%. Motor vehicle and transport (10.9%); mining (9.9%); industrial activities (9.6%) and other (9.6%) followed. Farming scored a meagre 4.7%. Interestingly, respondents did not rate tourism impact (7.6%) on the national parks very high.

4.5.10 Wetlands

Figure 4.15 presents the causes of environmental damage to wetlands, as perceived by the respondents.

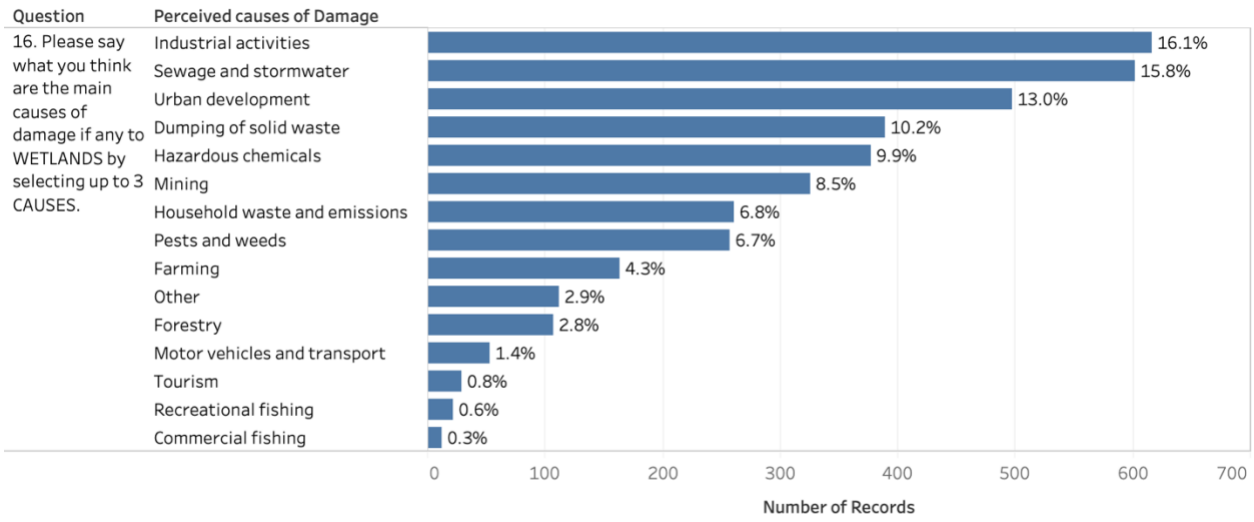

Figure 4.15: Causes of damage to wetlands

Source: Researcher's compilation

Damage to wetlands was perceived to be caused by industrial activities (16.1%) and sewage and stormwater (15.8%), followed by urban development; dumping of solid waste and hazardous chemicals at 13.0%, 10.2% and 9.9% respectively.

4.6 Adequacy of environmental management

Respondents were asked how well they believe various resources are managed on a scale from very well managed to exceptionally poorly managed. The management of National parks stands out substantially as the most positive resource management.

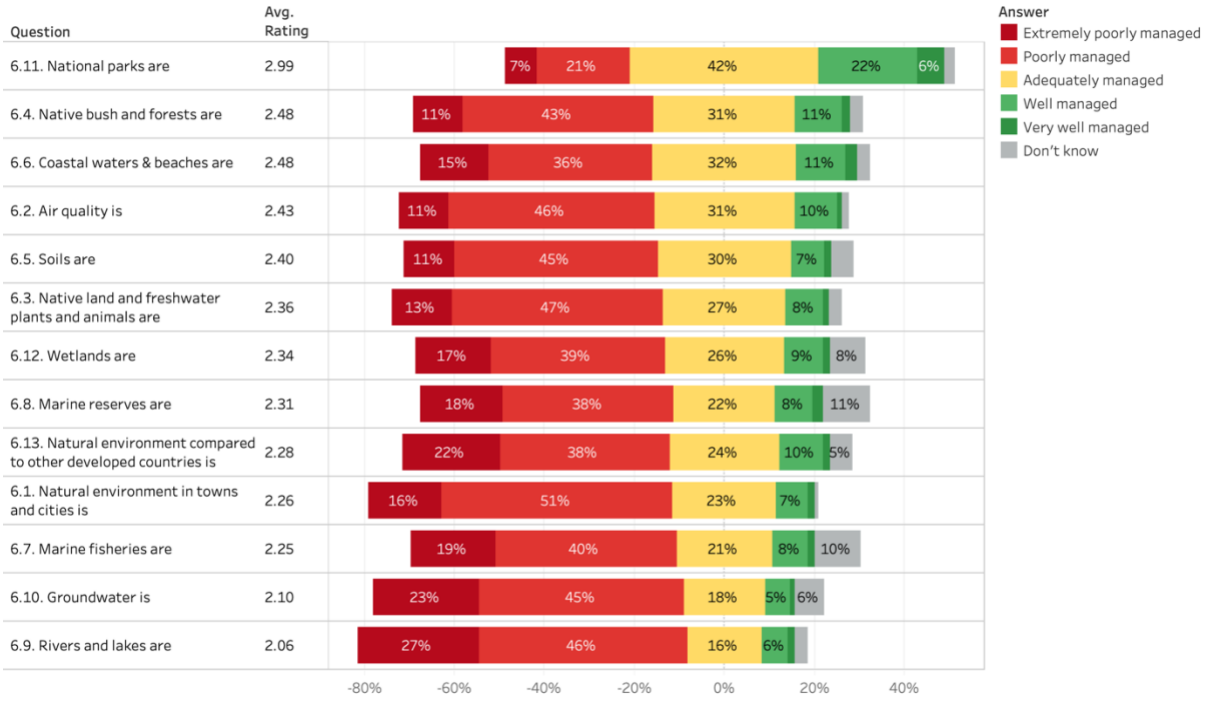

Figure 4.16: Management of the environment

Source: Researcher's compilation

Figure 4.16 indicates that the management of National parks did not only have the highest number of respondents indicating it is adequately managed (41.8%), but also the highest number of respondents indicating it is well and very well managed (27.9%). If we compare this to the New Zealand study, we find that they also perceived their national parks most favourably managed, rating it at 86.4%, higher even than the South African study at 69.7% adequate and above (Hughey, Kerr and Cullen, 2016).

Native bush and forests received an adequate and above rating of 43.7%, with a very high negative rating of 54%. This is a lot higher than the national park negative rating at 28%. The New Zealand native bush and forest rating were also substantially higher at 72.9% positive (Hughey, Kerr and Cullen, 2016). The coastal waters and beaches with adequate and above the percentage of 45.4%. 41.8% of respondents felt that the air quality was at least adequate. Overall, less than 50% of people felt these resources were adequately and better managed. Comparing the overall mean score of South Africa (2.36) compared to New Zealand at 2.98 indicates New Zealand respondents perceived their environment to be managed substantially better.

When we look at the worst end of the spectrum, respondents were least satisfied with the management of rivers and lakes. 46.1% indicated that these resources are poorly managed, and 27% extremely poorly managed, thus 73.1% in total, followed very closely by the management of groundwater at a total of 68.8%. The New Zealand study also had rivers and lakes as the worst

managed resource but still significantly better at 47,2% negative compared to South African respondents at 73.1% indicating it is poorly and exceptionally poorly managed (Hughey, Kerr and Cullen, 2016). The management of the natural environment in towns and cities received the highest poorly management rating of all questions (51.4%), but not as high a percentage of very poorly managed (16.3%) it thus came in at third-worst.

Most of the rest of the resources also received relatively unsatisfactory ratings. Native land and freshwater plants and animals received 60.2% unfavourable rating. Soils (56.5%), wetlands (55.3%), marine reserves (56.4%), marine fisheries (59.1%) all received majority negative ratings from the respondents. For the question, the natural environment compared to other developed countries 59.3% of respondents indicated our environment was poorly or very poorly managed. How did respondents get involved themselves?

4.7 Citizen environmental action

Respondents were asked to indicate if they have taken part in any of a list of activities on the following scale: regularly, yes, no. It is not surprising with the high publicity on electrical supply issues and water shortages in various regions around the time of data collection that those were activities respondents were partaking in highly. Figure 4.17 indicates that 91.3% of respondents reduced or limited their use of electricity and 87.1% of respondents reduced or limited their use of fresh water in the last 12 months

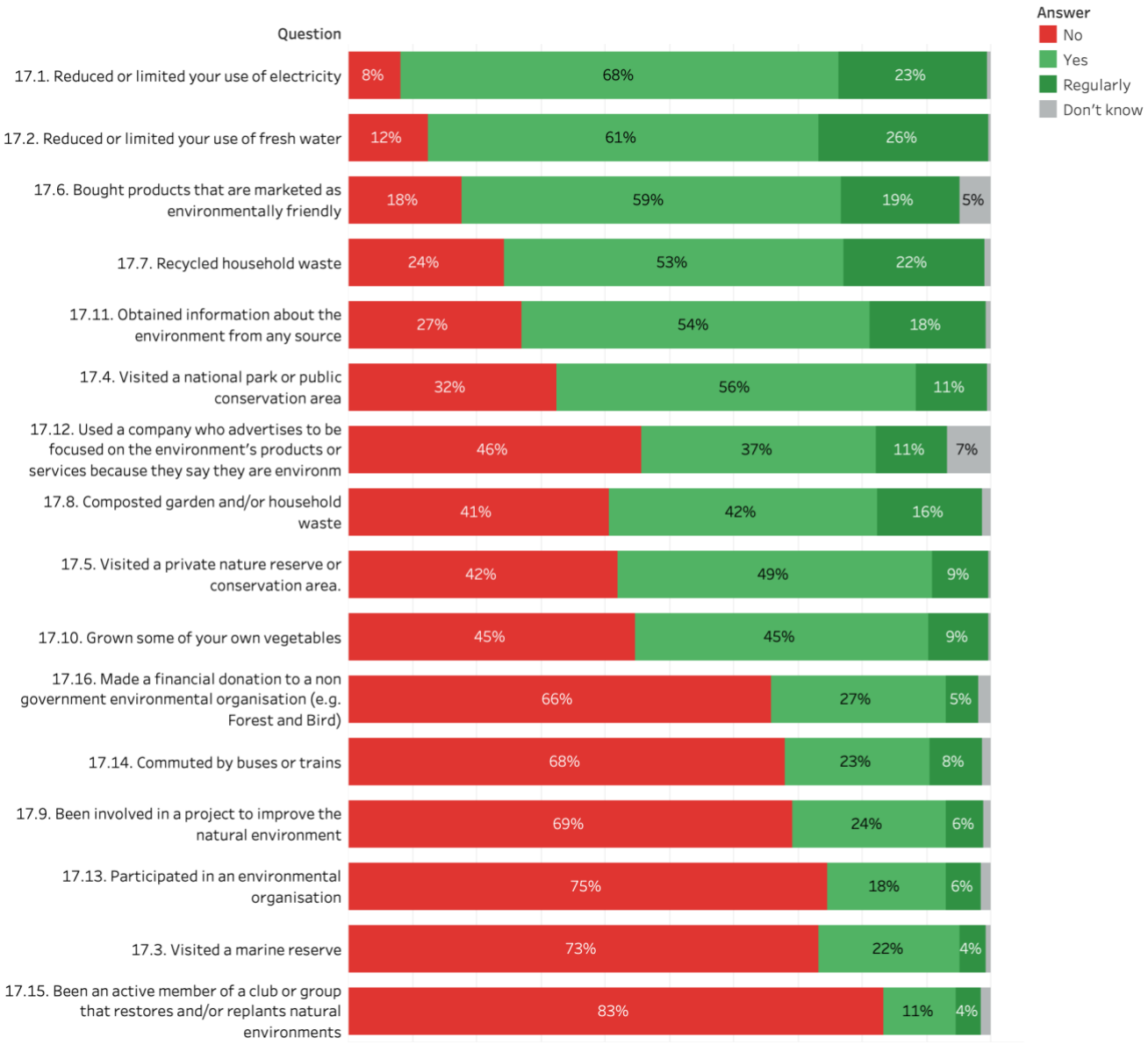

Figure 4.17: Environmental action in the last 12 months

Source: Researcher's compilation

55.8% of respondents indicated they visited a national park or public conservation area, 11% did so regularly. More South African respondents visited national parks than New Zealand where these ratings were 48.5% and 4.9% respectively (Hughey, Kerr and Cullen, 2016). Private reserves had a smaller amount but still a significant amount of visitors (48.9%) and 8.6% indicating they regularly go to private conservation areas (This question is unique to the South African study). Looking at the domestic environmental activities we see that 52.7% recycled, 21.8% regularly, 58.8% of people bought products marked environmentally friendly 18.5 % did so regularly. 41.5% composted their garden waste, and 16.3% does so regularly. Planting a vegetable garden had similar results with 45.3% and 9.2% respectively.

The highest rate of non-participation included three activities that are directly linked to active rather than passive environmental activities. Participated in an environmental organisation (74.4%), been involved in a project to improve the natural environment (69%) and been an active member of a club or group that restores and replants natural environment (83.2%) all received meagre participation rates indicating a more passive approach to conservation initiatives. Supporting the need for conservation tourism areas to educate and increase the active involvement of the public in conservation activities. The visited marine reserve had the second-lowest rating of participation at 73.1%.

There was a high interest in environmental issues 54.1% obtained information about the environment where 18% did so regularly. 47.4% of respondents used and regularly used companies services who advertise they are environmentally focused. Only 8% of the sample use buses and trains regularly indicating a skew toward more high-income respondents being part of the survey who own cars. 32% of respondents indicated they had made donations to environmental organisations.

A purely quantitative study that has categorized measurements, as well as one developed in another country like this environmental perceptions study has the disadvantage of not providing the respondent to air their personal view on the main environmental issues. The next section provides the respondent just such an opportunity.

4.8 The most important environmental issue facing South Africa

As part of the qualitative study, respondents were asked an open question “What do you think is the most important environmental issue facing South Africa today?” The question generated response from 1304 respondents. Two of these respondents indicated they did not know what answer to provide and one respondent indicated “everything” (55478, 2016). The open questions were categorised and coded in Excel (Gossow, 2017). The citation format (55478, 2016) draws on the Excel coding analysis. To ensure anonymity and that any quotes’ original data can be sourced, each quote was provided with a unique ID, for example, 55478.

Responses were categorised in themes for the clarity and enrichment the main themes were divided into subthemes or categories. The themes were developed by drawing on common keywords mentioned by respondents in their own words. The next section provides the count of the responses segmented in the five main categories.

4.8.1 Main themes respondents identified

South African respondents were the main target of this study; it is thus essential to get an understanding of what the respondents perceive to be the most critical issues facing their local environment today. The main question "What do you think is the most important environmental issue facing South Africa today?" was followed on by a question as to the reason for their choice. The analysis is based on the central question supplemented for understanding with the reason for their choice. The five main themes identified during the study included: negative impacts on the natural environment; water supply; socio-economic, social and psychological concerns; environmental conservation practices and government, municipal and organisational involvement.

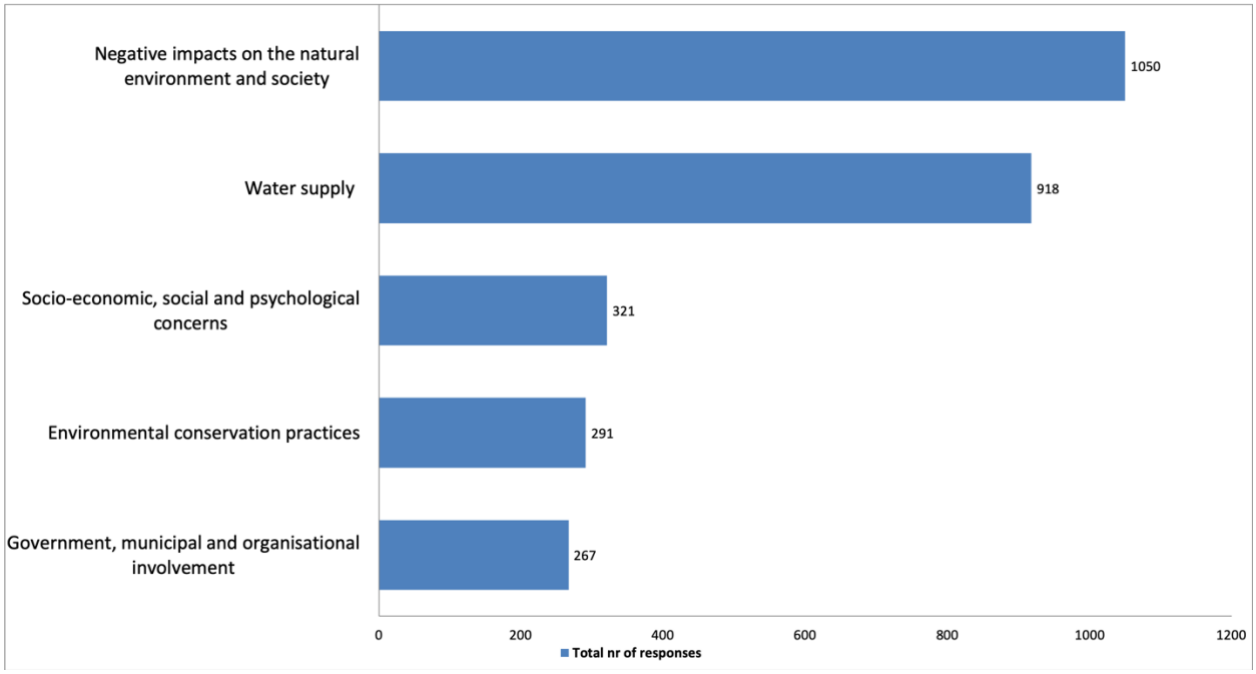

Figure 4.18: Most important environmental issues as perceived by respondents

Source: Researcher's compilation

The results in Figure 4.18 indicate that the overwhelming number of respondents (1050 respondents) who cited the human impact on the environment is perceived to the most important environmental issue as a whole. The respondents provided details on various pressures humans have on the environment and pollution, in general, was the most often mentioned followed by overpopulation and population sprawl including the rise of urban and informal developments, industrialisation and urbanisation.

South Africa is a water-scarce country, and during the data collection period of this study, various areas went through a drought. The influence of this on the data has been substantive. The total

number of respondents that included some water-related mention numbered more than 900, almost 70% of the sample. It may not be the top category, but due to the broad nature of “human impact” in the first main category, many of those include water-related issues. The majority of respondents mentioned the lack of and decline of water supply for human use, agriculture and society.

It is clear that the environment is not an isolated issue and the inclusion of socio-economic, social and psychological variables in the response attests to that. Respondents highlighted some social concerns (321 respondents) on as priorities over the environment by enlarging though the link between society and the environment was clearly described. The major trend in this study is water which society needs to live, our reliance on it was overwhelmingly present in the perceptions of the respondents. The government, municipal and organisation involvement (management/mismanagement, corruption) was perceived to be one of the key (267) environmental issues linked directly to managing these water resources.

Another key trend (291 respondents) in the open question response was the environmental conservation practices, including those for climate change, environmental conservation, resource conservation, energy generation and recycling. Although the number was overshadowed due to the concern for water in the country. The next sections will focus on the details by providing the subcategories of the thematic analysis, starting with the negative impacts on the natural environment and society.

4.8.2 Negative impacts on the natural environment and society

The negative impact on the natural environment and society topic is covered by a large percentage of respondents (1050 respondents, 81%) presented in Figure 4.19. This is understandable as, as a topic, this covers the main question "What do you think is the most important environmental issue facing South Africa today?" as a topic. Pollution, in general, represents a large number of responses (497). One hundred and fifty-six respondents highlighted overpopulation and population sprawl as the major environmental impact on South Africa. Other concerns included dumping, mining, industrial pollution, littering, agriculture, hunting and poaching, marine pollution and exploitation, chemical pollution, fires, overgrazing and deforestation, soil pollution and invasive plants.

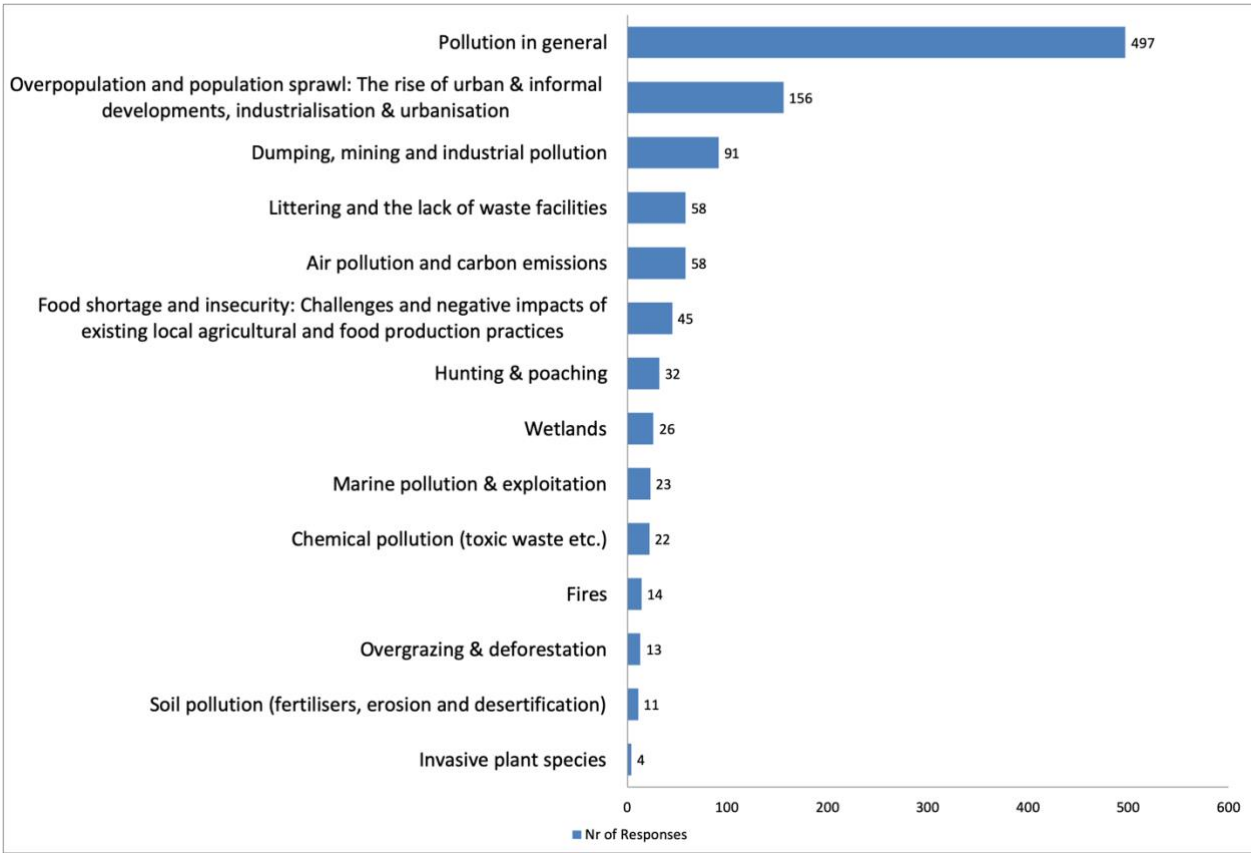

Figure 4.19: Sub themes: Negative impacts on the natural environment and society

Source: Researcher's compilation

The general pollution topic includes a large number of subtopics, including household waste, water pollution, dumping, sewage, toxic waste, industrial waste, and air pollution. "Dumping for solid waste is one of the biggest problems in SA. People will walk past a bin and dump garbage on the pavement or the road when driving. Rivers are waste disposal places. Parks and recreation are non-existent, and if there are, it's full of rubbish!" (53732, 2016). The topic is extensive but can be seen as a collection of respondents who specifically view the human impact on the environment is a crucial threat, and a large number of respondents (497) perceived it to be the primary cause for environmental concern.

Overpopulation and population sprawl including the rise of urban and informal developments was a concern for some respondents "Balancing human/community development and upliftment with preserving/restoring natural resources and environment" (53961, 2016). The topic includes many mentions of "urban development" "urbanisation" and "population growth" comments. These comments in many cases were provided as stand-alone comments. However, human settlement comments are also linked to habitat destruction and pollution highlighted in the first topic.

Respondents (91) highlighted dumping, mining and industrial pollution as a critical concern "Pollution of groundwater by ill-monitored mining activities, pollution of rivers and dams through widespread dumping of plastics and solid waste as well as human waste — plastic bags littering the landscape and sea" (55307, 2016). Many of the responses referred to illegal dumping, including household waste and in waterways. The littering sub-topic solicited fifty-eight responses, highlighting specific cases of municipal service delivery failures and general population attitudes. Mining and mine rehabilitation were mentioned were covered by the respondents highlighting its direct impact on the public.

Hunting and poaching topic mainly consists of respondents (32) speaking out against poaching with very few mentions of hunting. "Unregulated poaching and government officials' complicity" (51929, 2016). Some respondents specifically mentioned wildfires that are increasing in their areas (14), overgrazing and deforestation (13), soil pollution (11) and invasive plants (4).

Agricultural mentions numbered forty-five and highlighted food shortage and security as a critical concern. "Over Population. We keep on breeding at an alarming rate and allow illegal people to stay in SA. It's not sustainable. Not enough water and productive land to grow food etc." (52370, 2016). The food security topic was in many cases explicitly linked to the water shortage or drought. Similarly, wetlands as a topic were linked to water pollution, shortage and other water-related concerns. Marine pollution and exploitation received specific mentions "The drain on our wildlife and overfishing by commercial fishing boats" (56040, 2016).

Many of the above topics link back to the general water supply issues highlighted by respondents. Water supply was the main issue highlighted by most respondents and will be covered in the next section.

4.8.3 Water supply

The study was conducted during a period where various areas in South Africa was going through drought and water restrictions. The category "Lack of fresh and potable water supply, and decline of available water resources – negative impact on agriculture and society" received 918 overall mentions including five categories including water availability, management of water resources, pollution, sewage and fracking and groundwater.

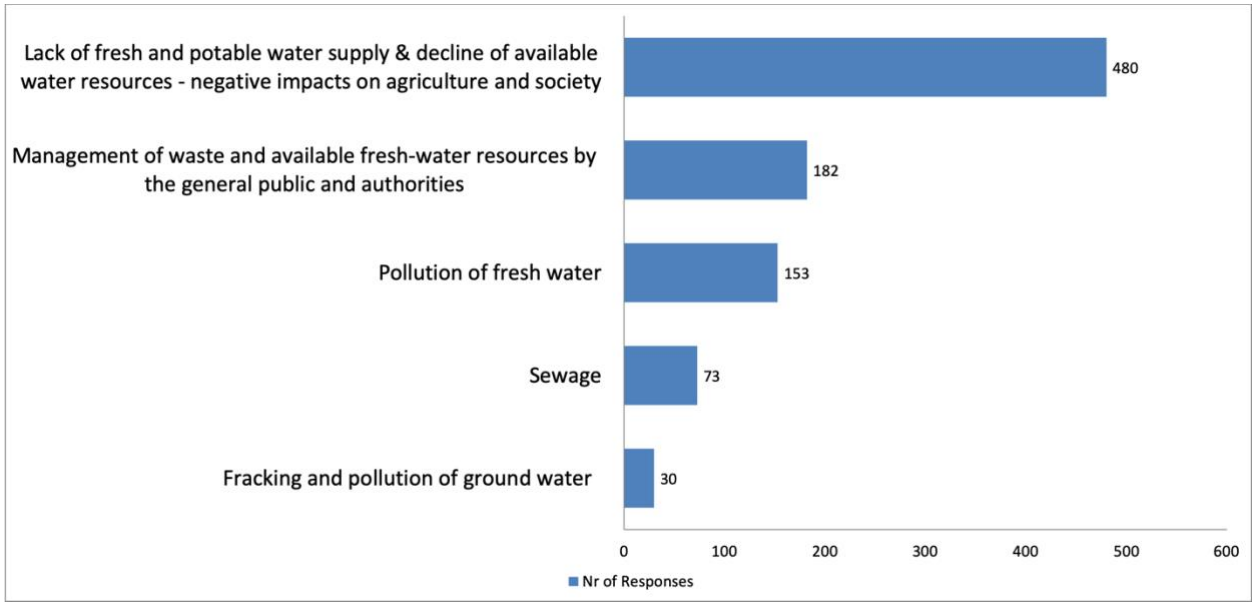

Figure 4.20: Sub themes: Water supply

Source: Researcher's compilation

The lack of freshwater presented in Figure 4.20 is highlighted by many respondents as the most pressing environmental issue at the time of the study. Respondents indicate issues around fresh drinking water as well as irrigation for food production as can be seen in the following response. "WATER: shortage and pollution - cannot sustain the population for much longer in die future, for fresh drinking water and clean, unpolluted water irrigation" (56205, 2016). The unfounded apportioning of blame to other demographic groups, specifically those in informal settlements does get some mentions such as "Water wastages. We only have a little water left, and yet I see people leaving taps running in informal settlements" (56458, 2016).

Management of available freshwater resources by the general public and authorities also got mentioned by the respondents as a critical concern. "Destroying our freshwater systems. Water is such a valuable resource which I do not believe is being managed correctly" (51998, 2016). The mentions include the management of freshwater resources such as dams and rivers. "Freshwater resources, specifically river and streams, are managed poorly, and with climate change, the impact will increase" (52197, 2016).

Further to the freshwater resources, the management of sewage and water treatment plants by private and public corporations are a concern. "Availability of freshwater. The local municipalities are poorly managed, allowing raw sewage to be discharged into rivers continuously. Mining is also a big industry affecting clean water sources" (52182, 2016). It has been shown that water pollution awareness is correlated with non-African respondents, African respondents are shown to see it as water pollution as a community issue. Awareness of programs to clear waterways and

alien vegetation is more common among non-Africans (Anderson *et al.*, 2007). The environmental perceptions study sample had a limited number of African respondents and would thus be more aligned with the non-African perspective.

Not only is the management and pressures on water supply mentioned but also the physical acts of polluting the water systems. The pollution of freshwater resources is also mentioned by respondents as a critical concern “Our water is under huge risk of contamination from mining and household waste, especially in the informal settlements where there is little or no control. Ten years ago Rand Water was rated as among the top 5 cleanest water. Not the case anymore” (52409, 2016).

As can be seen in some of the quotes in topics covered so far, the environmental concerns respondents raise do not exclude social context. Many of the responses specifically highlight social concerns which will be covered in the following section on socio-economic, social and psychological concerns.

4.8.4 Socio-economic, social and psychological concerns

The interrelatedness of environmental and social concerns is very clearly highlighted in the responses from the respondents. Some responses aim to apportion blame to other socio-economic groups highlighting some underlying social pressures within the country. Other respondents indicate the link of the environment on health, unemployment and education. In total 321 of the respondents mentioned social concerns presented in Figure 4.21, highlighted in five categories including poor environmental attitudes, disregard by general public and government (lack of responsibility and don’t care attitudes); need for environmental education and awareness; crime, health and other social concerns (racism, illegal immigrants); unemployment, poverty and inflation.

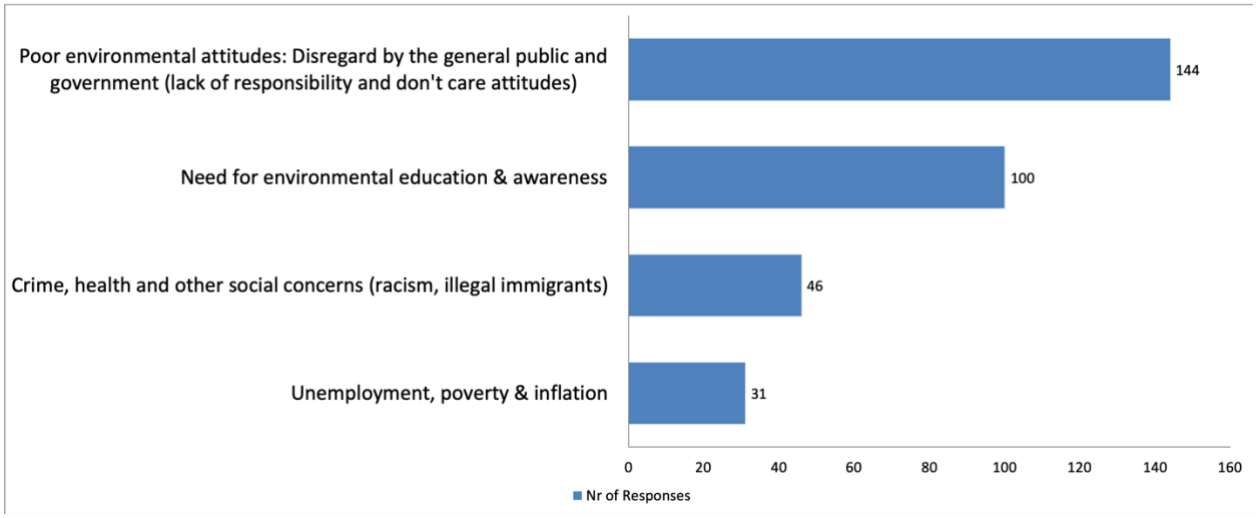

Figure 4.21: Sub themes: Socio-economic, social and psychological concerns

Source: Researcher's compilation

Value judgments came through strongly with respondents highlighting public ignorance, lack of moral fibre, don't care attitudes and our general issues of being human. "I believe that people are the cause of most issues in South Africa. The blatant disregard for any green areas. Disregard for the laws, and the fact that no one gets prosecuted for destroying the environment. The fact that our borders are gone, and the number of people coming into the country is becoming a problem (55436, 2016)."

Some highlighted that this is due to the lack of environmental education as well as the lack of education in general and indicating that the population is uninformed and have a lack of knowledge. Although many respondents focus on the general lack of education, some respondents did have a future outlook on proposing education to fix the environmental problem. "People are not educated on environmental issues, and they do not know the small things they can do that can help the environment (52491, 2016)."

Some respondents took the opportunity to make a statement that crime is the most critical issue in the country (not environment) "Crime is the most important issue facing our country (56527, 2016)" and similarly unemployment "Unemployment is the most important issue facing South Africa (56529, 2016)." Some respondents linked the environmental situation to other social issues such as health "Conflict of providing basic human resources (food, clothing, houses, health, education, etc.) to a growing population whilst sacrificing investment into the long-term sustainable environment (56309, 2016)", "Complete lack of integrated, coherent consistent policy, allied to rapid urbanisation and high levels of poverty (54669, 2016)" highlighting the interconnectedness of issues.

The importance of the interrelatedness of social and environmental issues is highlighted by the respondents. Further responses respondents highlighted in the next section focusses on environmental and conservation practices humans undertake.

4.8.5 Environmental conservation practices

Conservation practices such as biodiversity, wildlife and natural habitat are central to this study. Some of the respondents specifically mentioned conservation-related environmental pressures, but they also mentioned conserving water and air quality (climate change and global warming). Conventional and renewable energy generation, recycling and sustainable use of resources were also sub-themes mentioned by respondents as presented in Figure 4.22.

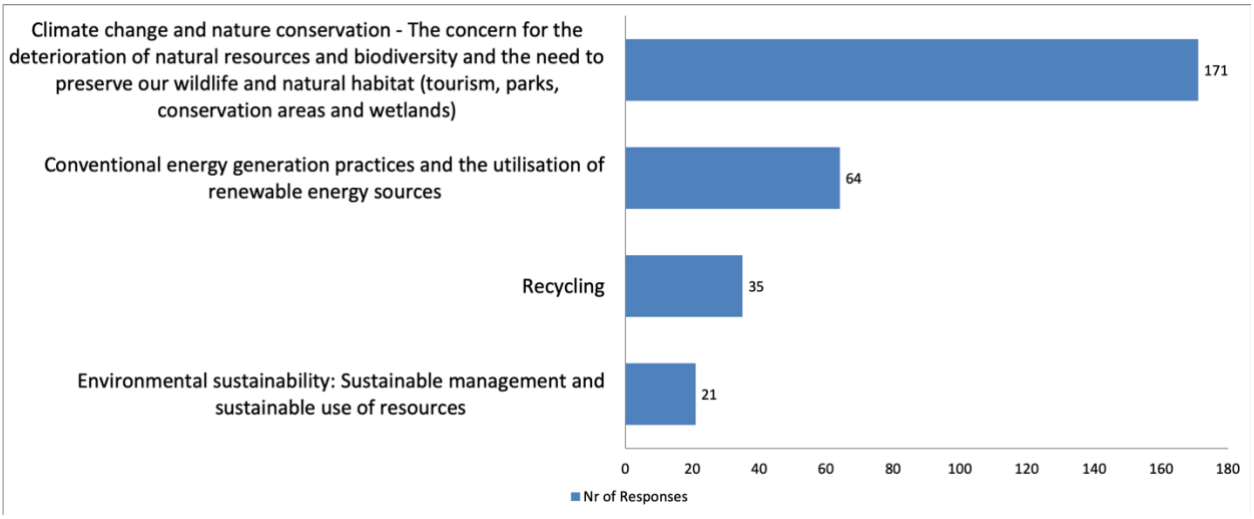

Figure 4.22: Sub themes: Environmental conservation practices

Source: Researcher's compilation

The topic of environmental conservation practices can be best described with this quote "Protection of all aspects of our natural heritage and environment is vitally important, e.g. our rhino, elephants, lion, national parks. Raised awareness about the effects of global warming. NOT implementing nuclear power plants, but rather explore wind farms etc. Our environment should ALWAYS come first. Commercial fishing, trophy hunting, canned lion industry, poaching of wildlife, fish and other marine creatures are serious issues which we need to focus on constantly. REDUCE our human footprint" (52356, 2016). The topics covered by this respondent covered a wide range of topics, while other respondents covered certain aspects highlighted.

Some respondents included the conservation of water resources "Cleaning our natural water supplies - e.g., The Vaal dam. There is so much effluent going in there, and it is affecting our drinking supplies, our environment and our living standards" (55159, 2016). Climate change and global warming were mentioned as one-word statements or short phrases, as topic respondents

did not expand much on. Respondents instead linked the topic with other concerns, highlighting the interconnectedness of this topic. Energy generation practices also solicited some response (64) “air pollution, I live in close proximity to a coal-fired power station. The smog that covers most of the Jhb/Ekurhuleni area is horrendous” (55206, 2016). The topic included some mentions of renewable energy as well as they move away from coal power. Some specific mentions were made by respondents not to use nuclear power.

Recycling as an environmental issue is covered by thirty-five respondents “Improper disposal of waste products, recycling. 1. It poisons the environment 2. Litters the country” (54757, 2016). The mention of the sustainability management, and how we deal with environmental issues solicited some response “Working together to make a sustainable environment for everyone to live in and enjoy” (52095, 2016). Respondents also make it very clear that government, municipal and organisational involvement is critical to conservation, and that is covered in the next section.

4.8.6 Government, municipal and organisational involvement

South Africa as a country faced significant public pressure due to governance failures to change the way the country is run during the period of data collection, resulting in the ultimate removal (resignation) of the president of the country in February 2018 (Macharia and Winning, 2018). The perceptions of the respondents also provided indications of dissatisfaction with the way the environmental resources are managed to fall in two main categories poor governance and corruption presented in Figure 4.23.

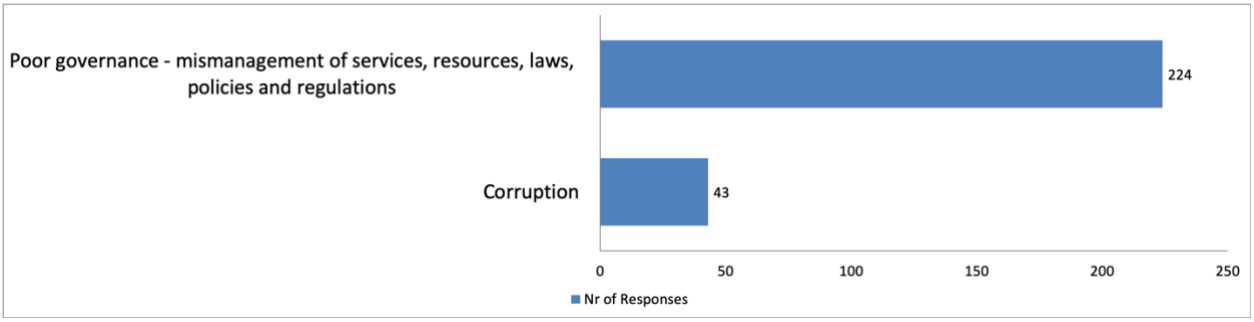

Figure 4.23: Sub themes: Government, municipal and organisational involvement

Source: Researcher’s compilation

The following quote by 56257 (2016) indicates the frustration that is the order of the day during data collection "South Africa has a low respect for the environment. We unfortunately have in government people who are in it for self-enrichment, anything else is low priority. A government that allows canned hunting, lack of respect for the environment, allowing companies to trample over wetlands and on the ecosystems for self-gain is not a friend of the environment. Water

wastage in most municipalities is criminal (took Springs municipality 6 weeks to fix a water leak on my pavement despite almost daily reminders) water is such a vital and scarce commodity. So many areas in drought are totally forgotten in SA, if it wasn't for the people of South Africa's kindness travelling all over the country with bottled water to give to the people in these drought-stricken areas, there would be millions of deaths because we have a government that does not care. Don't get me started on the Nuclear deal billions to be wasted on that when there are much more pressing issues that need to be attended to, as for a 4billion jet for the president!!!! Horrors, that money could be put to use repairing ageing infrastructures!! Save us from politicians who don't care about the environment!."

Although not all the quotes from the respondents included such a detailed response, many of them raised similar issues, including government and municipal corruption, politics, governance and many complaining about a poor government. Some respondents highlighted poor policies rather than blaming the actual government; they were, however, the minority.

As can be seen in Figure 4.23, the perceptions of the respondents have to be measured against the timeframe in which it occurred, drought and government failures at this specific time had a significant influence on the perceptions of respondents.

4.9 Limitations of the environmental perceptions study

The reliability and validity of the data are critical; however, during the analysis, some data and research inconsistencies may present itself. The limitations of the quantitative study include inconsistent, discrepant, or unexpected data that was uncovered during the analysis of the data.

1. Population group: Data collection utilising social media as well as an email campaign resulted in a population group skew in the data limiting the representativeness of the findings. A total of 68.8% of the sample was white while they only represent 8.1% of South Africa's population. Black respondents represent 17.8% of the study respondents but represent 80.7% of the country's population.

2. Urban vs Rural split: The data is also skewed toward respondents living in urban areas (84%), limiting the representation of rural respondents (16%).

4.10 Summary of the research findings

The study measured the South African perceptions to the environment. For comapritive purposes the study was conducted during the same year 2016 to aligned with the New Zealand Environmental Perceptions study for comparative purposes (Hughey, Kerr and Cullen, 2016). The

results were categorised under the state of the environment, pressures on the environment and respondents' response to environmental pressures.

4.10.1 State

South African's predominantly experienced the state of the natural environment as negative (54%) only 46% of respondents found the environment acceptable or better. Compared to the New Zealand data where 74% of respondents indicated the environment was acceptable or better (Hughey, Kerr and Cullen, 2016). It is also found that how positive respondents perceive the environment highly correlates with how they perceive the living standards to be in the country.

The state of native bush and forest ratings received a 60.3% adequate and higher rating. Indicating that the majority of respondents are positive about the condition. Only two other variables scored higher soils and coastal waters and beaches. Respondents were very negative about the natural environment in cities and towns 60.2% negative rating only trumped by their perceived state of the rivers and lakes of the country with a 66.3% unfavourable rating. The open question "what do you think is the most important environmental issue facing South Africa today?" confirmed respondents concern about the water supply in the country with 918 respondents referring to water in their responses. The country was going through a drought situation in some areas and the open question responses referred to it.

77.8% of respondents indicated that the area allocated to National Parks is moderate to high. Most respondents recognised South Africa diversity of native land and freshwater plants was moderate to high. Respondents were also positive about the amount of native bush and forests with a 68.8% moderate to a positive response. Availability of parks and reserves in towns and cities showed a 56.6% negative response with 33% indicating it is very low.

4.10.2 Pressure

Respondents were highly negative about the human impact on the environment. All the pressure scores were mainly ranked as bad or very bad. The negative ratings ranged between 78.6% negative for industrial impact on the environment and the best performer but still negative at 58% farm effluent and runoff. Respondents were requested to pick the causes for environmental damage to various environmental areas including land, air, water, bush, forests, marine and national parks. Respondents felt that native land, freshwater and plants were most impacted firstly by industrial activities (17%), then sewage and stormwater (15.8%) and dumping of solid waste (12.8%). Urban development and mining followed with 10.6% each. What is interesting is the low impact score for farming at 2.9%.

Pressure on native forests and bush was mostly blamed on urban development (17.7%) and Industrial activity (15.8%). Farming came in at eighth position at a meagre 6.2%, following dumping, mining, forestry chemicals and pests and weeds. Respondents felt the main culprits for damage to beaches, marine fisheries and marine reserves were commercial fishing, and sewage and stormwater. Respondents felt sewage and stormwater, and industrial activities were mainly to blame for freshwater and wetlands damage.

Respondents were asked to rate the pressure on national parks. The leading cause of damage to the national parks was felt to be urban development (13.7%). Once again farming escaped the blame at a meagre 4.7%, 11th on the list after tourism in the eighth position with 7.6%. It is important to note that the South African Department of Environmental Affairs (2014) reported that farming and the cultivation of crops is the leading threat to biodiversity. Motor vehicles and the transport was rated as the second most significant variable but very closely ranked to mining, industrial activities and others.

Respondents were asked an open question ‘what do you think is the most important environmental issues facing South Africa today. The most mentioned topic pertained to pollution in general, which was related to overpopulation, the rise of urban and informal developments as well as industrialisation and urbanisation as well as other pollution variables. The second biggest pressure mentioned about water, is the lack of potable water supply and the decline of available water resources. Its impacts on agriculture and society were mentioned. Many respondents directly mentioned that the country was going through a drought at the time of data collection.

The next section will indicate how respondents feel responsible parties are dealing with these pressures as well as what their contributions to the betterment of the environment are.

4.10.3 Response

When it comes to resource management respondents were by far most positive about the management of the national parks in the country, 69.7% of respondents indicated that the national parks were managed adequately and higher. It is essential to note the sizable neutral number 42% is still counted as part of the positive outcome as it indicates adequate. It is very interesting that although native bush and forests are rated second, it has a very high negative score of 54% a lot higher than the 28% of the national parks. Although respondents connect positive management results to the national parks, they do not necessarily connect that same positive result to the natural environment they manage. Respondents were most negative about the management of the South African water resources, groundwater (68%) and rivers and lakes

(73%). A result that was confirmed in a large number of respondents mentioning it in their open question as to the biggest threat to the environment in the country.

Except for the national parks, all the other areas of the environment was rated as being managed poorly or extremely poorly. The natural environment in towns and cities received a 67% negative response. 60% of respondents indicated that South African environment is badly managed compared to other developed countries. Further to this, learning is how the overall results compare to the New Zealand results. Although different variables were highlighted in the two countries, most of the respondents were much more cynical about the environment than their New Zealand counterparts, and this included the pressure, state and response results (Hughey, Kerr and Cullen, 2016).

Finally, the study asked respondents what environmental action they took themselves. The first four most mentioned actions that respondents took part in was what they could do by changing their consumption patterns. They limited the use of electricity (91%) and water (87%), bought products that were marked environmentally friendly (78%) and recycled (72%). 72% of respondents obtained information about environmental issues. The majority (67%) of respondents has also visited a national or public park, as well as a private conservation area (58%). Only a small percentage of respondents, however, took specific actions for conservation: made a financial donation to environmental NGO (32%), been involved in a project to improve the environment (30%), participated in an environmental organisation (24%) and been involved in a group that restores and replants natural environments 15%.

It is crucial to understand the general public perception of the state of, pressures on and response to environmental concerns. It not only provides an insight into the macro environment and its effect on the conservation business but also provides a way to measure the current state of the South African environment, and how well conservation officials are performing. In the next chapter, the stakeholders in the conservation tourism industry present the pressures they have to deal with and the actions they need to take to make their conservation entities successful.

Chapter 5 introduces the results from the face-to-face semi-structured stakeholder interviews. The analysis looks at the respondent views of the conservation businesses external environment, stakeholders and current strategic planning practices.

CHAPTER 5: RESULTS FROM STAKEHOLDER INTERVIEWS

"Strategy is creating fit among a company's activities. The success of a strategy depends on doing many things well - not just a few - and integrating among them." ~ Michael Porter (1996: 17)

5.1 Introduction

Stakeholder interviews were conducted in the form of semi-structured face-to-face interviews. The objective of this qualitative study is to understand the current management practices of conservations areas, specifically related to strategic management. An interview guideline was prepared and can be found in Appendix B. The interviews addressed the following broad topics: biographical questions providing an outline of the type of company, size and interviewee position; industry-related questions to understand the pressures the management experience in the industry; questions to understand if management primarily looks at the management of conservation areas through activity-based thinking or from a resource perspective; market environment questions to understand the interplay between stakeholders; questions to understand business success in their business units; questions to understand the planning practices and finally, a section on conservation initiatives, measurement, and success.

The scope of the study was at an industry level but the interview results provided a very interesting broad range of macro-environmental impacts on the business entities. Some questions were posted to understand the role of government in the strategic decision and planning space. Various perspectives are provided from industry-wide impacts to market and business success type impacts. Discussions around greening of conservation areas are also referred to, to understand initiatives the conservation areas are conducting to reduce their footprint and/or environmental impact. Very few of the interviewees seem to have training in the field of management, even less so when it comes to strategic management. Some of the concepts assessed had to be explained to the interviewees to provide a baseline of understanding. The research uncovered the main macro-environmental variables the stakeholders, as well as conservation area managers, are currently considering in their strategic planning.

The analysis has where possible been structured broadly according to the strategic management framework provided in figure 2.21 - starting from a broad macro-environmental perspective utilising the PESTLE framework to categorise the topics. The industry perspective starts with an outlook on the growth and attractiveness as perceived by the interviewees and then focusses in on their perspectives and understanding of the elements of the Porter's five forces model (section 2.6.4). Most of the interviewees highlighted the critical importance of stakeholders (section 2.6.9) which is discussed next followed by the interviewees perspective on the resources perspective which is often provided as an alternative view to the competitive forces by Porter (section 2.6.6).

The analysis provides an outline of how the conservation objectives align with the strategic business objectives of conservation area management. Finally, the study looks at the strategic, business and planning practices of the interviewees currently follow.

Table 5.1 below summarises the interviewees' decriptions (as respondents) to this study. Each response is captured by referencing their statements with the approporaite code (e.g. 1PL) and date of the interview (e.g. 2015).

Table 5.1: Respondent (interviewee) description

Respondent code* **(see final row for code description)**	**Respondent (interviewee) number** ***n* = 15**	**Respondent description**
1PL	One and two	Two senior management respondents from a multinational conservation tourism company which employs 1700 employees and hosts operations across Africa, some of which are wholly owned and others with concessions in large public conservation areas. The businesses main function is hospitality in conservation tourism areas.
3PS	Three and four	A resort manager and the individual responsible for conservation initiatives at a privately owned conservation area in the Limpopo province. The conservation area is owned by an international investor and runs Independently to produce returns. The conservation area has three main value-creating initiatives: firstly providing field guide, hospitality and vocational training;
5SO	Five	A senior manager at a conservation SETA with years of conservation experience. The business is responsible to train field guides and other employees in the conservation tourism industry.
6PL	Six	A group operations director at a hospitality group who runs multiple hotels, lodges and timeshare resorts in Southern Africa. The conservation areas under management mainly generate income from international tourists, local tourists and conferences.
7GS	Seven	The reserve has various value-generating activities such as gate fees, overnight lodges, camping, fishing amenities, conference and venue hire, rentals, and a friends group who assists in certain capital projects in the reserve.
8PS	Eight	Lodge manager and owner at a private lodge based in a 18000ha public/private partnership reserve in Gauteng. The lodge has 60 beds and employs about 48 staff members. The value-generating activities include weddings, conferences, adventure camps and game drives.
9GS	Nine	A reserve manager at a 1500ha municipal reserve in the Western Cape area. The reserve can sleep 4 people in their one cottage, the main income is from the municipal government, gate fees (especially during the flowering season).

10GS	10	A reserve manager who manages several municipal reserves in the Western Cape area, with some resorts under management. The resorts are mainly open to the public and do not charge entrance fees, as their main objective is to provide education to the adjoining low-income areas.
11GS	11	A biodiversity area coordinator for a region in the Western Cape. The interviewee is responsible for managing a municipal reserve and additional areas. The reserve's income is mainly generated through gate fees and some rental fees from the restaurant.
12SO	12	An owner of a private tour operation running conservation type tours throughout Africa, which extends to the following locations: Serengeti, Ngoragora, South Luangwa, Chobe, Bagatu, Mahungu, Etosha, Okavango Delta, Kruger, all of the Natal Parks, Etala, Hluhluwe, Addo Elephant, Karoo, Tsitsikama, Fish River, and Kalahari.
13SO	13	An owner of a supplier in the conservation tourism industry which provides booking services, marketing services as well as training to private resort managers.
14GS	14	A conservation area manager in a 24000ha conservation area, based in a biosphere reserve (managed by Cape Nature). The area revenue-generating activities include the rental of cottages, gate fees, and the film industry.
15PS	15	An owner of a private conservation tourism initiative in a fynbos area. Income generation for this private organisation mainly includes the wine farm industry. The cottages, camping and conservation initiatives act as a secondary income generator.

***Respondent code description (e.g. 1PL)**

- The first digit represents the order of the respondent(s) e.g. 1
- The second digit indicates if the company is a private (P), government (G) or stakeholder (S), e.g. P
- The final digit indicates whether the company is classified as a small conservation area (S), large conservation area (L) or Other Stakeholder (O), e.g. L

Source: Researcher's own compilation

5.2 Macro-environment

The process of environmental scanning is vital in identifying the environment that a business or conservation area operates in. The PESTLE framework looks at the main areas of influence on the business as being political, economic, social, technical, legal and environmental. The environmental variables that influence the business were discussed in a very ad hoc way by respondents. No explicit environmental scanning models, frameworks or tools seem to be used to determine their impact. The PESTLE framework was used to categorise interviewees main environmental concerns and to evaluate its effectiveness in conservation tourism management.

5.2.1 Environmental

Looking after the environment is the lifeblood of the conservation tourism industry. Tour operators will stop supporting parks who do not look after the ecosystem by for example allowing overgrazing “we don’t go to [place] anymore because of total mismanagement in the park. It borders on… overgrazing not worth it, we pulled out because it was a bad experience. Poaching has been prevalent in the area as well. So we do look at, previously it used to be on our itinerary it has been taken off and that is a pure conservation area that has been mismanaged so we would get feedback from clients as well, what are we trying to sell so we do look at particular areas” (12SO, 2015). Conservation tourism areas are reliant on their environment and in some instances need to provide their water and provisioning of electricity due to remoteness of the reserves. “it runs its own generators, boreholes for water… we have desalination plants on the ocean, we purify our own water, we run our own generators” (6PL, 2015).

To gauge what the conservation area managers are doing to ensure their resorts are environmentally sustainable and take environmental pressures into account, the respondents were asked to discuss their environmental initiatives. The wide spectrum of responses include a resort that won green building awards. “the place is special,… We won this award for the facility, the architect got a R1 million but I am not sure how appreciated it is… I think the most striking is this composting toilet…” (14Gs, 2015).

Some organisations have started to look at the environmental impact of various of the resources they use and their activities. “So I would audit our consumptions say, electricity, diesel, petrol, paraffin. How we store? Are we environmentally friendly? Are we storing those things properly? Are we not polluting? Our waste management our water management, our procurements, we haven’t. We have been touching on it we haven’t got to in-depth yet. Are we sourcing locally? Is it actually viable? that kind of thing” (1PL, 2015). Some of the conservation areas have not considered any environmental initiatives such as emissions control or recycling. “Nee nog nie. Dit is ook iets wat ons nog wil doen” (15PS, 2015). The implementation of green initiatives has not happened without any challenges.

Specific mention was made with regards to the crime affecting the implementation of green initiatives. “Green ablution blocks are not working the way they should because of theft and vandalism” (7GS, 2015). Indicating the importance of social factors.

5.2.2 Social

Political instability, social unrest and other variables such as health risk influences the perceived safety of African tourism. “If you move outside of SA you move physical instability once again in

East Africa and then I think the other component would be what else you think is a threat. It's only really instability or something like an Ebola or that kind of thing, anything that stops the guest from coming" (1PL, 2015). Events in other African countries such as Ebola affect South Africa directly. "They are closer to Ebola then we are, but in actual fact they will say Ebola. They won't come to Africa because of Ebola" (1PL, 2015). Conservation business in the affected countries is affected due to these events. "So far for Africa was the Ebola crisis, it's massive. So the numbers in Africa have decreased completely, but the business itself if you are good and clever there is still a lot of business going around and that's with a marketing strategies focus on conferences and individual tourists" (6PL, 2015).

Social factors are critical external variables that have an impact on the conservation tourism business. Variables such as crime and corruption also have a political component, and the following section shows how social and political factors interlink and affect conservation business.

5.2.3 Political

Safety is a major concern for international travel. "There's challenges there all the time. At the moment there is a challenge there, it is all to do with airlines and transport and so on, the government there has come up with a new plan so you can only fly into international airports. It's got to be Mozambique air operators which take you from there, which poses problems for many of the guests going in because Mozambique operators are also not always reliable. They have also had huge problems with elections. They had huge problems around the opposition parties and so on. They had a bit of violence and so ongoing on in the country and they have also had a lot of kidnapping going on so they had their challenges and those things affect tourism. If people don't feel safe they don't go" (13SO, 2015).

The political risk in multiple countries thus influences conservation tourism results. "Kenya has a bombing people switch off Kenya they don't go to Kenya they say leave it for 6 months. The Ebola crisis for example, that set us back 2 years. So you know and if I tell you that East Africa's average occupancy right now is below 30% so you know that sector is taking a bath right now and that's simply based of instability either through health or political, and then the markets that are travelling are very sensitive. Americans are extremely sensitive, they won't go where there is potential trouble" (1PL, 2015).

Political variables outside South Africa can have a positive spin-off on South African tourism. "I think so because of what is happening in Kenya as well. The alternative and the best alternative is to come south so we have had a lot of spin-off from that because of what they have had politically going on there. A lot of people have cancelled there and have made their bookings in

Southern Africa" (5SO, 2015). Some of the conservation tourism operators have operations in other countries.

The political variables also have a major influence on the public conservation areas through a change in management, with elections determining who will be responsible for the budget and also the strategic decision making. "Well obviously we have council elections every 5 years so our structure changes and it's a constant battle. Especially from a biodiversity side and an environmental side to always get that support from the top structures because that changes every 5 years. You have to start from scratch again going up. We do have our long term strategies and plans and policies in place, so overarching the support and the buy-in is there, but getting that after the election when you get new councillors and new ward people in and then you need to educate from the start and get that support and that buy-in again" (9GS, 2015).

It is clear that social and political factors are interlinked and can have a major influence on the financial sustainability of conservation areas. Economic factors also play a key role.

5.2.4 Economic

The major variable mentioned in terms of the economy was the Rand strength. South Africa is seen as a 'budget destination'. "Then of course you have the overseas market which is quite big for us and that market, they see it as a bargain because of the exchange rates, (the Euro the Dollar). We are quite cheap destinations. Problem is that the agents who supply you with clients into SA" (6PL, 2015). The Rand strength does seem to affect the profitability of conservation tourism directly and an increase in Rand strength reduces international tourism. "I think it is difficult to fill their beds, it helps when the Rand goes down against the Dollar but we have had all other sorts of challenges regards to tourism in SA" (13SO, 2015).

The interviewees found the Rand strength at the time of interviews favourable to business. "World economics, has a definite impact, people travel yes. We can expect people because of the rand and the pound currently" (1PL, 2015). Currency strength also determines the influence of differential pricing. "if you are a foreigner going into Kruger you are going to be paying R240 per person per day entrance fee, we are paying R60, which is a big difference, but if you take it in Pound terms there is not a train smash" (12SO, 2015).

The economic impact was reported as being related to the acquisition of clients, especially international guests visiting conservation areas. Technology is another variable the respondents linked to clients, specifically for sourcing and social interactions.

5.2.5 Technological

Much of what came up regarding technology centred around social media and the way it has changed the tourism business. Social media posts and apps like TripAdvisor seem to have a direct influence on the clients that the conservation tourism areas attract. “Electronic media helps us a lot with getting the market we are looking for” (6PL, 2015). Social media provide word-of-mouth and bragging rights as wildlife provides great shareable moments. Businesses are implementing ways that make it easier for tourists to share their experiences. “The people tweet it, Facebook it. It gives them bragging rights. We have got Wi-Fi in our bakkies. At any given time there are 8 people at any time online, tweeting. Not about the lion, where I am, what I am doing and I need to send it now! I can’t wait for when I am back to wherever I am going to share while I am on the vehicle now. So that’s what it is about” (8PS, 2015). The social media channels also pride ways for the stakeholders to provide feedback to conservation areas. “we get good feedback from that” (9GS, 2015).

Social media as a marketing tool has taken over marketing activities that was previously focussed on print media. “Bemarking gaan nie meer oor tydskrifte en koerante nie, dit gaan nou oor sosiale media… Definitief, en daarvan het ek statistieke. Ons het 3 jaar terug het ons vir die laaste keer in ‘n tydskrif geadverteer soos bv. hierdie 4 x 4 en Caravan Outdoor, wat jou R30 000/R40 000 vir ‘n enkel volkleur bladsy kos. Dan gaan jy op sosiale media en dit kos jou, kom ons sê R500 en hulle het ‘n boost fasiliteit wat nou hulle bemarkings tipe ding is en jy bereik 150 000 - 200 000 mense. So 90% van ons bemarking vind nou plaas op ‘social media’, en vandat ons dit begin doen het het ons ‘n onmiddelikke ommeswaai gesien in besetting” (3PS, 2015).

Social media does not only have a positive influence on the conservation area, but it also provides a risk of negative comments. “if you have a bad experience, especially with social media now, if somebody had one bad experience it’s on social media in 5 seconds and to actually then combat that is enormous. The amount of time and energy that you have… it is just monumental. If somebody gives you a bad review to then get out on social media and combat it is enormous, so the customer experience in terms of what they bring to the industry and how they can either completely destroy it or elevate it” (5SO, 2015). Interviewees felt it made it easier for the clients to complain publicly. “Ek dink die effek van mense wat so maklik kla op sosiale media in plaas van komplimenteer, het ‘n groot effek op ‘n mens se besigheid en dit maak dat jy as eienaar sorg dat jou besigheid so vlot as moontlik verloop om enige negatiewe kritiek op sosiale media te voorkom, want jy kan dit nie keer of regstel nie” (15PS, 2015).

Social media has also increased the client's demand for instant gratification. They demand to see certain species to ensure they can take a photo. “I want that immediately. Can’t understand that

it is going to take you 2 days to find a lion who has just had cubs that's not going to show it to anybody in the world… I mean, how long have we had the lions for? Four years and I have seen them twice. And not in the sense of it is laying there alive. I have seen the elephants more than I have seen the lions" (8PS, 2015).

Some clients have indicated they are not on social media yet. TripAdvisor has received several mentions as the preferred app to use to find accommodation. A good rating on TripAdvisor is top of mind for many of the interviewees. "TripAdvisor, if you are talking that specifically, we use the tool a lot, if we are looking for accommodation something that we don't know, we will go in there and have a look. We are not big on Facebook or Twitter, we are not even there. We just changed our website, because our types of clients are not tech-savvy. You will see at the bottom follow us on Facebook but I don't think I have ever put anything on Facebook you know, from a company perspective" (12SO, 2015).

Some of the conservation areas are on social media through their friends' groups, they also report utilising it to stay in touch with their visitors to report invasive species. "We are a lot more up to date on what's happening. So it's positive in a sense. Also we still largely rely on print media at this stage, issuing media releases. Social media we haven't explored that much we have started with invasive species unit that we are running on that. So wherever invasive species are the people see in Cape Town they can report that on Facebook or Twitter and all that type of thing, but largely from the reserve side we are not using it that much. At this stage, mostly through our volunteers and our friends, that type of thing" (9GS, 2015).

5.2.6 Legal

The unabridged birth certificate requirements received multiple mentions. The conservation areas have reported a substantial effect on their business due to its implementation. "South Africa right is facing that whole crisis on the fact that you have got to have birth certificates. If you know for anybody who. So that kind of thing is turning off the Chinese market which is a massive market if you are Chinese orientated" (1PL, 2015).

Keeping up with the changes in employment equity is also reported by conservation areas as having an impact on the daily running of the conservation area. "Government influence op [place] Natuur Reservaat is 100% legislative, met ander woorde, dit gaan oor BEE. Dit gaan oor alle tipe wetgewing waaraan jy moet voldoen. So you can never be in a comfort zone" (3PS, 2015). The public conservation areas have found the BEE requirement restrictive when it comes to tenders. "There is a lot of problems with BEE, you are not allowed to use this contractor, they have to have BEE, and as soon as they see City Council they just add percentages (50%, 80) on all charges

and we have to pay that. So it's not market-related prices at all. It's very skew and we pay lots more for equipment, cleaning material anything like that than you would in the private sector" (7GS, 2015).

Other mentions include flood lines legislation restricting river front properties which are highly sought after. "Vat net byvoorbeeld wanneer mense gaan kamp wil hulle naby water bly en 'n mens mag niks oprig binne 100 meter van die vloedlyne nie. So jy kan jouself net voorstel, om 'n 100 meter ver weg te bly van die water af is 'n entjie se stap elke dag" (3PS, 2015). A mention was also made from the perspective of farmers that cannot utilise land that has been earmarked as having plants that are threatened. The farmers are duly upset as they cannot utilise their own land and are not compensated. "So die omgewingsraad sal net sê dat daar niks gedoen mag word in daardie area nie. So dan is daardie grond niks werd nie, want dit kan nie gebruik word vir ploeg en vir boer nie, maar die boer word ook nie vergoed vir dit nie so dit is eintlik 'n Groenland raping wat plaasvind… So eintlik het die natuurbewaring nou grond gekry vir bewaring van die blommetjies, maar hulle vergoed 'n mens nie, hulle neem daardie grond net vir bewaring. Ek dink dit is op die oomblik 'n groot probleem in die lanbou want die boere word nie vergoed vir die geen toegang areas nie" (15PS, 2015).

The unabridged certificate requirements was a legal concern but also a major event or 'black swan' (Taleb, 2007) causing a major reduction in tourist from certain countries, affecting the conservation tourism industry. Major events can cause disruption and have to be considered in strategic planning.

5.2.7 Major events (black swans)

Nassim Taleb (2007) popularised the term 'black swan' in his book with the same name. The term is derived from the analogy that before black swans were discovered, all swans were presumed white, and no one predicted that black swans existed, until they were discovered in Australia. A black swan according to Taleb (2007) and summarised by Jochen Runde (2009: 493) classified by three characteristics 1) "It is an outlier, as it lies outside of the realm of regular expectations, because nothing in the past can convincingly point to its possibility"; 2) "it carries an extreme impact"; and 3) "in spite of its outlier status, human nature makes us concoct explanations for its occurrence after the fact, making it explainable and predictable". For ease of discussion, major events that tend to have these three attributes were described as 'major events' or 'black swans'.

The respondents recall environmental variables in the form of major events that influence on their business or conservation areas. These variables include the Ebola crisis, the visa requirements legislation, political unrest in Kenya and Mozambique; and the positive influence of the Rand's

weakness. The following quote provides a broad overview “I think it is difficult to fill their beds, it helps when the Rand goes down against the Dollar but we have had all other sorts of challenges regards to tourism in SA. Starting with Ebola last year, going through the visa requirements our government proposed issues in Mozambique with travel and so on. So there are lots of challenges in SA. The past few months have been tough for a lot of people” (13SO, 2015). The events not only had a direct impact on tourism where companies had operations in affected countries. “It was growing at a very nice pace and yes, again, political violence in the country has an effect on it. Major, major so far for Africa was the Ebola crisis. It’s massive, so the numbers in Africa have decreased completely” (5SO, 2015) but also on South Africa.

Major events include international events that influence South African tourism “when 9/11 hit we took a serious knock, but because our assets are spread we can struggle through. Where a small operator, a lot of them closed down in South Africa. So if you look at the impact of Ebola on a small operator in Tanzania, the gorilla circuit all that kind of stuff, those guys would have been hit massively” (1PL, 2015). The events that affected other countries in Africa and countries that are very far from South Africa seem to affect Southern African tourism altogether. The perception of Africa as a country when adjusting travels due to travel risk has a major influence on our tourism. When asking 6PL (2015) whether the Ebola virus affect South Africa as well, the interviewee responded “Oh yes very much so. People were afraid to come to Africa wherever it was, was not maybe in SA but they classify SA as Africa. So, yes, it had a major effect and also a lot of our business comes from Africa and those guys were restricted to travel so they couldn’t travel, so yes it had an effect on it.”

The abridged birth certificate requirements that the South African government has instituted has had a major effect on tourism in the country. Providing an example of how government legislation can affect business success, 6PL (2015) states “the problem at the moment which is hampering our growth, is the new regulations done by the home affairs with reference to the visas for abridged birth certificates. It’s taken out our Asian market completely because there is already a 40% drop in business. It’s been major. Tourism organisations are trying to get the government to overrule and try and change it back to what it was….”

Major events can have a significant impact on the sustainability of the conservation area. The industry factors, according to McGahan and Porter (1997) is the most significant factor in the company’s profitability.

5.3 Industry environment

The significance of industry pressures on the conservation tourism organisations financial sustainability due to its importance was a large part of the interviews with stakeholders. Variables such as industry growth, industry attractiveness, cooperation and Porters the five forces model (Porter, 1979; Porter, 2008) were discussed with interviewees.

5.3.1 Industry growth

What has been very clear is that the political and other environmental variables have a major influence on the growth and attractiveness of a country's tourism market. Organisations that operate in multiple countries have experienced this first hand. "Well, it depends where, it's a growing industry, it's just it does vary though and I think you are getting a decline in East Africa currently, not only Ebola. Ebola set it back radically so did the Kenya bombings and whatever else is going on up that way, so the tourism has died there quite radically and there are people falling out of the business. Whereas in Southern Africa (Botswana and South Africa), it's picked up again. So, you get this it might balance it out. In the end, I think worldwide it is increasing it is seen as an opportunity" (1PL, 2015).

Some of the interviewees were positive about the growth of conservation tourism in South Africa. "It's tremendously. Ons groei nou met 'n gemiddeld van tussen 14% en 22%" (3PS, 2015). Some interviewees seem to refer to the growth in visitor numbers when referring to growth. "Certainly here in terms of visitor numbers we are growing. If I look at visitor stats since I have been here in 2006, it is still in that upward curve in terms of visitor numbers" (11GS, 2015). Conservation tourism growth can supplement other farming initiatives due to its growth. "Ek dink dit neem toe. Ek dink die mense wil al hoe meer die 'regte' ding doen en dink met wildplase ens. is toerisme 'n goeie byvoeging" (15PS, 2015). 7GS (2015) referred to the industry as not saturated, but stable; "I think it is stationery, our numbers are not picking up but we are not losing a lot of visitors either so its saturated I would think not saturated but stable I would say"

Capital investment was mentioned by respondents and the growth of actual properties referred to. Some interviewees also referred to the growth in areas under management and tourism resorts but felt the actual number of visitors declined affecting occupation rates. 9GS "Definitely increasing, especially if you are looking at the accommodation and reserves coming up on the West Coast. So, the industry as a whole is growing the tourism is going down a bit. We get stats from the CT tourism office on the number of beds sold throughout the Western Cape and the CT area, and that has been on the decline which is a bit worrying. So, there is not a lot of tourists sleeping over like it used to be. We are looking at a 40% occupancy rate at this stage per month.

It's quite low but overall the conservation and looking at the ecological and eco-friendly type of accommodation, that's on the increase" (9GS, 2015).

Negative political, social and other issues in other African countries can have a positive spin-off in the South African market. "I think so because of what is happening in Kenya as well. The alternative and the best alternative is to come south so we have had a lot of spin-off from that because of what they have had politically going on. There, a lot of people have cancelled there and have made their bookings in Southern Africa" (5SO, 2015). The negative effect of the South African legislation for abridged certificates was mentioned as a negative effect on the growth in the industry. "At the moment tourism is a growing industry, the problem at the moment which is hampering our growth, is the new regulations done by the home affairs with reference to the visas for abridged birth certificates, it's taken out our Asian market completely because there is already a 40% drop in business" (6PL, 2015).

5.3.2 Industry attractiveness

When prompted on how attractive the industry was some interviewees approached it from a business perspective and indicated it was very attractive. "It is the biggest industry in the world, of course, it is attractive. Tourism and Travel is one of the biggest employers in the world. Our country, our region is hugely attractive. The opportunities and that that you see here are hugely attractive. The problems that we encounter they really are temporary. It doesn't take away from what we have" (13SO, 2015). The industry also seems to be attractive to prospective employees as can be seen in the response from a SETA that is responsible for training guides. "Oh for sure just looking at the number of young people that are still looking to getting into field guiding, that is a clear indication I mean we are constantly growing in numbers and if that's is an indication in terms of how attractive it is" (5SO, 2015).

Some referred to South Africa as a destination attractive for international tourists. "Very much so, if you take Africa as a destination, we focus on wildlife so everybody wants to come to Africa for wildlife. If you look at our game reserves compared to the rest of Africa, it's a safe destination and people are starting to. We haven't got the migration, we haven't got the game reserves you have got in Africa… at the moment we can still deliver a reasonable service a variety of products and I think from that point of SA is an incredible destination for tourism, also our internal tourism" (6PL, 2015). Some respondents referred to the attractiveness of the conservation tourism activity and the job role rather than the actual industry. "Tourism, people are always going to want to go on holiday… It's an industry which is pleasing, it's a nice atmosphere it's a nice job to be in and it's nice to get positive feedback from clients. You are selling good experiences… It's a feel-good

type of experience that we sell here… So if you look at other industries mining, agriculture, engineering or whatever it is extremely attractive" (12SO, 2015).

Game farming has to be approached with caution. It is indicated by 7GS (2015) that small game farms are risky and expensive to set up. "I think there is a lot of people that think they are going to buy a farm and make lots of money and it's going to be nice and cuddly animals running around and all of that, but it's actually hard work and it's an expensive exercise. I don't think it is a quick money-making thing and the guys that survive have been in the industry a long time. Many of these small game farmers start and big ideas and they spend a lot of money and they work they don't survive." A prudent financial approach to the setup of such ventures are critical. "it depends on how strict you are with your finances when you build these places. If you borrow 100% of your money to build these hotels you need to achieve certain occupancies and average room rates and those are not sustainable" (6PL, 2015).

Some interviewees were not as positive and found the environment unsustainable in its current form. "Hmm… No. No, it's not sustainable… I think there's a shift in paradigm. I think if we're going to pull out a few stops we will make it sustainable. The traditional concept of having a few bokkies, having a piece of land, getting people to come out and experience nature. It's not going to cut it…" (8PS, 2015). Restrictions in government legislation in the setup of buildings on protected land and other limiting variables with limited income potential is a hurdle. Further social issues such as not wanting strangers on your farm restricts income opportunities for some. "As ek nou maar net kyk na die besigheidspersone wat ek van weet, bv. die boere of die landbouers, om hulle te oorreed om 'n stuk veld uit te sit vir bewaring is nie maklik om hulle te oortuig nie, want daar is nie 'n inkomste aan bewaring nie en as hulle dan nou 'n inkomste wil hê uit die bewaring uit, dan moet daardie persoon huisies bou en al die dinge wat daarmee gepaard gaan, soos toestemming ens. Maar dis nie almal wat hou daarvan om vreemde mense op hulle plase te hê nie" (15PS, 2015).

5.3.3 Porter's five forces

Michael Porter (1979, 2008) developed the five forces model highlighting the five forces that affect the industry attractiveness of a firm. In this section four of the five forces are discussed, including; customer power, supplier power, the threat of new entry and threat of substitution.

5.3.3.1 Customer power

Similar to the previous sections the discussion around customer power yielded a diverse range of results. Some of the respondents feel that the customers are very powerful in their business due to competition. "Very powerful. I think we have a, because it's a competitive market,

competitive in terms of what is on offer, little. If you include drinks or don't include drinks can be the differentiator whether you get the business or not. How you put a package together it's what you also tailor on so if we are just beds are chances of success are less than if we are beds and a certain of what we call add ons" (1PL, 2015). Some felt that this power causes pressure on their business and determines their offering "Nee dis baie… So my antwoord is dat ek dink een van die grootste druk wat ons onder is kom van die gaste af. Hulle bepaal wat ons aanbied" (15PS, 2015)

Although customers of public conservation areas would not be thought of as having much power, managers provide insight that the customers' power does have an influence. Municipalities, for example, place a high value on customer power. "Because we are a city. Our communities/individuals are our customers and they have a big say. I am not sure how other municipalities run themselves, but in the City of Cape Town, if Joe Soap puts in a complaint it needs to addressed. There is a certain timeframe, etc." (9GS, 2015). The value the public area puts on the customer does affect how powerful they are perceived. "Certainly our management style here is we strive for world-class to appease that customer. So I think we try and elevate the amount of power the customers do have I think that plays a huge role" (11GS, 2015). Although these communication lines exist some public officials do not feel they provide any power as people in power do not really take cognisance. "I don't think the guys that make the decisions truly listen to what the visitors of the reserve actually wants. I don't think that happens" (7GS, 2015).

The increase in the popularity of social media has influenced the power of the customer, especially in the tourism industry, which is very much affected by public opinion. Social media has provided a platform for individuals to reach a large audience, which increases their power. "Massively, if you have a bad experience, especially with social media now. If somebody had one bad experience it's on social media in 5 seconds… It's frightening, you get one bad viral tweet and that's your business. It hits a million you have to battle and deal with every response and justify what you are doing and stop it" (5SO, 2015). Social media risk requires constant management and dealing with negative experiences customers may have posted online is required. "…very, it could work against you in a negative way and that's why we have got a policy. We monitor all websites and if there is a posting of any of our products we respond immediately…" (6PL, 2015). Some feel people rather complain than a compliment on social media. "Ek dink die effek van mense wat so maklik kla op sosiale media in plaas van komplimenteer, het 'n groot effek op 'n mens se besigheid en dit maak dat jy as eienaar sorg dat jou besigheid so vlot as moontlik verloop om enige negatiewe kritiek op sosiale media te voorkom" (15PS, 2015).

Customer service is key and the success of the business relies on it. The customer power in the tourism market seems mainly geared around the word-of-mouth from satisfaction. Applications

like TripAdvisor provide ratings of the attractions and informs future stays. “Ek dink maar om gaste gelukkig te hou, ek weet dit klink klein, maar die manier hoe jy met gaste omgang en die manier hoe jy gaste hanteer bepaal jou besigheid van môre” (3PS, 2015). Staff selection to improve the customer satisfaction, is key. “the success of our business relates vastly to the interface of how the guest and the staff member interact, and that has always been one of our big selling points… we would rather have somebody who is guests friendly or alternatively guest-orientated than have somebody with a whole lot of qualifications and is not that friendly” (1PL, 2015). Further to social media influence and general customer satisfaction the Consumer Protection Act has also increased the customer power of the general public. “With the new Consumer Protection Act a lot of these companies have been challenged…” (6PL, 2015).

5.3.3.2 Supplier power

When it comes to conservation tourism, geography seems to influence the power of the supplier due to the remoteness of some of the resorts. “I don’t think that they are powerful. I think it varies where you are, you talking, because, once again, regionally in SA you have a vast number of suppliers, so if you fall out of bed with one you can get another. If you travel to some of the other areas like Namibia, for example, Sosus Vlei, there is not many people who deliver there, so you have one supplier who does everybody, there is nobody else in the competition because it is too far out.” (1PL, 2015). In areas where the supply chain has well developed the power of the supplier decreases. “…areas where the ecotourism industry is more well developed you are going to have a better developed supply chain, it more competition, you are going to have more choice. So if you go down to the Lowveld, I mean, their industry there is lots of little industries on the back of all those lodges. The lowveld is packed with lodges, there is lots of supply and you can bounce between one and the other quite easily. No problem” (1PL, 2015).

Although private conservation areas accessible to tourists have choices of suppliers in some areas, their buying power and ability to influence prices from the suppliers are limited. Thus increasing supplier power. “Huge. Ek meen, as jy kyk na wat ons aankoop as ‘n enkel oord, en wat ‘n plek soos [place], het baie van hulle aankope byvoorbeeld, Parkeraad, baie van hulle voorraad is gesentraliseer. So as jy gaan op ‘buying power’, dan het dit definitief ‘n groot invloed op tussen wat ons doen en wat ‘n Parkeraad byvoorbeeld kan doen” (3PS, 2015). The supplier consolidation has decreased the competition among them and increased supplier power. “Ooh yes Bidvest is controlling it. Um, in as much a supplier becomes a problem if you are not in town and can make use of the normal, you don’t have the selection – so in terms of the competition or advantage of the competition of sourcing the cheapest best to up the profit margin you don’t have that luxury. Uhm, for me to fresh lettuce or the wife to get it I have to drive to Pretoria” (8PS, 2015).

Some interviewees were clear by stating that supplier power did not affect their business. There was enough competition. “Nee wat, daar is genoeg kompetisie onder die verskaffers so ek dink nie hulle het ‘n mag oor my besigheid nie” (15PS, 2015). There has been a drive to support local communities and local suppliers. “Supply is very important and our purchasing power is massive… We intensively getting the local communities involved to try and, we are busy in discussions with the tourism enterprises to see to get the local guys to deliver to one supplier and then we buy vegetables, chicken and eggs from the local communities” (6PL, 2015). The purchasing power of the government for public institutions is large and supplier power low. 9GS “Because we are municipality all that stuff is governed by the Municipal Finance Act. So all our work that we need to do either goes out on tender or RFQ so we procure services from service providers” (9GS, 2015). The purchasing power does not always provide protection against high prices nor does it improve efficiency. “all other suppliers we use have to go through the city councils tender process… it makes it very difficult. My personal opinion is that we get overcharged for almost everything we pay. Three, four, eight times more than we would on the cheapest tender” (7GS, 2015).

5.3.3.3 The threat of new entrants

When the interviewees were asked about the attractiveness of the industry they provided some evidence that the threat of new entry is high. “The industry is growing. There are issues at the moment with tourists travelling, but that’s a whole other ball game. The truth of the matter is there are new lodges starting up all the time… there are lots of properties opening up, people getting involved in the industry” (13SO, 2015). and continuous development has affected the occupancy rate. “We are looking at a 40% occupancy rate at this stage per month. It’s quite low but overall the conservation and looking at the ecological and eco-friendly type of accommodation, that’s on the increase” (9GS, 2015). However, when they were asked about the threat of new entrants not many respondents felt it was a problem, due to the differentiation and development of destinations. “SabiSands is extremely well known internationally, they are able to produce a hell of a product and therefore it is the first choice in SA. Kenya with their certain attractors, once its well knew the migration, for example, that’s what people will go for so new areas have to establish themselves and unless they have something unique takes them a while to get onto the same platform” (1PL, 2015).

Some conservation areas felt it was not a problem due to their resort being well established and their regular local client base. “Vir ons het dit nie rêrig, omdat ons ‘n gevestigde kliëntebasis het, het dit nie rêrig ‘n groot invloed nie, want ons is baie baie gevestig in die mark… Jy gaan moet redelik vêr gaan om te kom op die vlak waar ons nou is, ek bedoel ons slaap nou 1800 mense op ‘n aand” (3PS, 2015). Other conservation area managers feel that the risk is small for

conservation tourism, specifically due to the limited land left for conservation purposes. This seems to be a strong viewpoint specifically in the Western Cape area “We are so built up at the moment we can’t expand at all” (7GS, 2015). “Not really such a big thing. With us there isn’t all that much land left in the City of Cape Town so I don’t think that is really a big thing for us” (11GS, 2015). Others felt there is not much land left and that the business proposition is not worth it “No. Nothing. In the Western Cape there is no more. It’s not worth it” (14GS, 2015). It is noteworthy that the previous three opinions came from public conservation area managers.

Certain conservation areas provide an insight which aligns with the theme of this thesis that philosophically the more area under conservation the better for everybody due to the conservation effect on the environment. 8PS “The thing is that philosophical there is no threat, the more conservation areas the better for everybody and our population is increasing far greater than what conservation areas are growing. And because of social media and that machine you have got there. I can’t go to the same place twice, because where my bragging are rights the next time round… I just hope there is a big enough pool for people to continue to tap” (8PS, 2015). “No, I think in our case we want new areas. Like I said, we only manage certain areas but we look at corridors linkages” (9GS, 2015). This viewpoint is, however, a luxury viewpoint stakeholders may have once the basic expenses for survival are covered.

5.3.3.4 Threat of substitution

Tourism abounds with substitution. Conservation tourism is substituted by city tourism; safari tourism by beach holidays; air travel by land travel etc. It is the diversity in tourism for which people visit South Africa. “People are not going to come to SA all the way from New York and go and stay at [place] and go home… so they would rather do Cape Town spend a couple days in Cape Town and Joburg then do a bush experience, go to the Victoria Falls. So, do circuit so, if you can make your circuit sexy it is actually better for you” (1PL, 2015). The diversity of our country is its strength “I think it is still necessary… you need to have the whole experience. I mean I love this country so however you can combine the experiences to give the best of what we have and it’s not only about conservation experiences or wildlife experiences there’s so much we can substitute for those experiences” (5SO,2015).

Not only is the diversity in the complete tour experience important, but it also enriches the conservation tourism experience. “Your game drive leaves at 05:00 in the morning comes back at 08:00 or 09:00 then do breakfast after that and then you sit in the unit… If there is a mine tour… it all benefits the whole tourism packaging of what you can actually offer so the more in the area the better for you” (6PL, 2015). The social side of the tour is also very important (keeping the local community in mind). The tour may be enriched by incorporating the history and culture of the

community. “You take Zanzibar for example, there’s we have got the Gizani forests and we have the mangroves and we have got the seaweed culture but then you also have the historical tours you have the spice tours so it incorporates history culture and conservation” (12So, 2015).

By partnering with who conservation areas believe their substitutes are (in the tourism environment) major growth is achievable. In the following example, the conservation area received much fewer visitors than the botanical garden by implementing trails that link the two. The conservation area received a major increase in visitors. “I always felt it was quite strange that if it wasn’t 50 it was 60 000 people would go to the [Botanical Garden/Nursery] it’s this controlled environment and manicured garden and there is this restaurant. And we would get 5000 day-visitors annually… So we put in a footpath so you could start here and go over to the gardens so there was our connection now” (14GS, 2015).

Four of the five forces customer power, supplier power, threat of new entry and threat of substitution have been discussed. Due to the significance of competition to the research, it was expanded and grouped into themes.

5.3.4 Competition

The competition formed a central part of the study. The research aimed to understand various aspects of competition as it pertains to the conservation tourism industry. Firstly, interviewees were asked about competition in the industry. Secondly, the study aimed to understand how the conservation motive to increase land under conservation reconciles with the notion of competition where a new conservation area is a threat. Thirdly this concept was taken further to understand the concept of competition between public and private entities.

5.3.4.1 Competition in the conservation tourism industry

Land under conservation is scarce and competition exists to acquire such land. “Ek dink die natuurlike pragskoon areas is nie baie nie, en die persoon wat wel in besit is van so ‘n area en dit ontwikkel in toerisme, gaan altyd kompetisie hê” (15PS, 2015). Once the resort is acquired, the competition increase occupancy is fierce. “SA and also competition wise, you know there is an oversupply of beds so you have to really be on the ball if you want your share of the pie” (1PL, 2015). Expansion is still prevalent even after the 2010 World Cup expansion that seems to create an oversupply. “to say you have reached your peak… look at Cape Town now they are building another 3 hotels into that market. All it means is somewhere along the line somebody is going to cut prices again to try and dilute the market or try and get that business and competition is stiff… Everybody was going on the 2010 World Cup, we all built, we all went and now suddenly you find the guys are suffering” (6PL, 2015).

Some conservation areas were aware of the competition and measured or compared themselves to competitors. “But we think we are better than [place] in that we only charge R10 and they charge R55. And experience is closer. Look we don’t nearly get the same volume, that potential is there but we don’t want it” (14GS, 2015). Others did so regularly. “Ons meet onsself eenkeer ‘n jaar, aan almal om ons, in terme van prys strukture, in terme van aanbiedinge aan gaste, in terme van konferensies” (3PS, 2015). Differentiation seems to be a popular strategy in the conservation tourism industry and many managers indicated that they focus on differentiation. “I have represented properties that are competitive with one another other but the truth of the matter every one of them is absolutely unique. Especially when you are dealing with the owner-driven properties, each one has their own selling point” (11GS, 2015). “What we have to offer is different to Kruger Park or Table Mountain National Park they have got Table Mountain they have got Cape Point… the types of activities are different…” (13So, 2015).

The clients look for differentiated experiences, once they have been to a place they look for something different that they may not have done yet. Tourism is about seeing the world and having different experiences. “If you want to have a leopard experience or you want to see different types of species that you are not going to see in Kruger or the Serengeti, and we are going to fly into camp it’s not a cheap holiday but it’s an experience of a lifetime. So, for someone who has done Serengeti, they have Kruger, they have done Etosha this is something unique and different… We choose the ones that people want to go to but we can also add a variety in there because what happens with our clients is that we have so much repeat business that we have to keep changing” (12So, 2015). Sometimes the differentiation is as specific as the accommodation facilities. “Sometimes it does come down to accommodation facilities” (12SO, 2015).

Competition can affect the income streams of the conservation areas. Each of the activities offered by the conservation tourist area has its competitors which have to be taken into account. 9GS “…we wanted to develop a restaurant a restaurant in this area. There is number of restaurants in the [place] area, so when we went out for calls at that time people weren’t very keen to invest” (9GS, 2015). Some managers did mention that they do not consider other conservation areas as competition. “I don’t think so. We don’t see ourselves as in competition with any of the other of the conservation areas…” (7GS, 2015). Some of the respondents responded that competition was good for the industry.

5.3.4.2 Competition is good

Various of the conservation area managers indicated that competition is good, not only in a philosophical way but some provided some clear advantages of competition. An advantage mentioned is the effect on the region. When a region becomes known it improves tourism to the

area. “It’s very good because what they do is advertise your region… Your profile goes up you now just need to be very competitive with your pricing” (6PL, 2015). “Let’s start here; a landowner just outside has seen that we are onto a good thing and they are busy building 2 similar cabins. As you drove in you probably saw them. It’s the same idea, they are calling it the ‘River Eco Cabins’. We don’t necessarily see that as competition but complementary” (14GS, 2015).

Competition maintains the standards and forces the conservation areas to consider trends and not become stagnant. “…we’ve always seen it as something good… It makes you look at the clients… It helps you adjust and keep up with trends and thing. I think without competition you can become very stagnant” (8PS, 2015). Similarly the lack of competition will reduce the standards 9GS “If there is no one to compete with then that standard is going to drop. You need to sell your product and market your product, and if you have got competition from neighbouring reserves then you are always going to try and improve your own product.” Finally, the essence of conservation is to try and conserve as much land as possible. Not only are more land area under conservation better for the environment, but it provides an incentive for the upkeep of the natural area and wildlife. “It is important because obviously there is a standard that needs to be met. Not only to provide the best safari experience, but also in respect for the environment and the animals… people see. Again, it is that fine line, isn’t it. It needs to be there to keep everybody on their toes and to keep them going” (5SO, 2015)

5.3.4.3 Conservation vs competition

One of the anomalies of the conservation tourism industry is that corporate firms compete against conservation areas that do not need to make a profit. Not only do they compete against public conservation areas but also conservation areas that are owned by philanthropists. “To give you an example, if you look at like you get these rich businesses or people that will own a lodge like… Mala Mala, or Branson’s one. They don’t have to make a profit you know because the bigger company the core industry is going to cover the losses and its probably a tax write off. But for a company like us, that is our core business. Now we have to compete against somebody who doesn’t really have to make a profit, makes it difficult” (1PL, 2015). Conservation is an asset that makes the conservation area competitive. By investing in larger areas of land and ensuring the upkeep and stocking of the land the conservation tourist area becomes more sought after. “We use conservation as a product, to make us look good. Well, it’s part of our business model and conservation is not competition, it’s an asset” (1PL, 2015).

The more land that is conserved, the better. With conservation needs in various biomes, it is important to keep differentiating and increasing the conservation products on offer. “There is so much land opportunity in this country still I think it should go to conservation… Because of the

diversity in the biomes this country has, we can afford to do it, I believe. And it's not only you looking at bushveld conservation, you are looking at obviously fynbos in the Cape and your Marine conservation areas as well. Generally, when people think of conservation areas it's always Kruger Park based. It's all that kind of bush but there are massive marine area which need to be looked at. The cape in itself is massive there are areas there that need to be looked at and protected so whilst there may be competition in new lodges popping up, I think competition is a good thing" (5So, 2015).

The promotion of conservation areas in longterm will benefit the area and its infrastructure. "I think there is a huge drive in this area to promote conservation areas and I think that is a good thing. Especially for the services and infrastructure, you can provide. So we are looking longterm at hiking trails and accommodation and that type of thing so it's not competition it's actually a benefit for this area" (9GS, 2015). The importance of approaching competition with a longterm perspective in the conservation market means fostering more conservation areas rather than focus on short-term financial gains. "I think that is just positive. We are also looking at longterm sustainability in terms of short-term gains you don't want to give up something today and suffer the consequences longterm so our main focus is biodiversity longterm…" (9GS, 2015). Government or private managers want more competition to expand conservation. "So we want to expand all be it a private entity or whatever, we welcome that" (9GS, 2015).

5.3.4.4 Government vs private reserves

One of the research questions of the study aimed to understand the level of competition between public and private conservation areas. The line between private and public is grey. Some of the interviewed private conservation management organisation run lodges in public parks (national and provincial). Increased Public-Private Partnerships is an objective SANParks continue to drive. Joanne Yawitch, chairman of SANParks explains that "SANParks hosted a Tourism Investment Summit… with the objective of attracting potential investors for new PPP products…" (SANParks, 2017). Some competition does seem to exist as seen in the quote from a private tour operator who hosts tours in these protected areas and finds the large deposits put a strain on their business. "…they are now booking outside the park because they know they can book Ado Guesthouse, which is a stone throw from the entrance of the gate, and they don't need to put down a deposit they only need to pay maybe 30 days prior to arrival so their cash flow they are not outlaying into National Parks" (12SO, 2015).

Some of the interviewees did not find that they compete with public conservation areas, they highlighted that it is a rather differentiated offering. "We have different sectors of the market that we do. Ours is top-end tourism so it is low volume high priced whereas most government

organisations are low priced and more volume-based. So, in terms of competing for sectors of the market, we are not competing in that regard. So, we operate within certain national reserves… There are a whole lot of private high-end lodges in Kruger but those won't compete with [place] and [place] and all those other camps because it is not the same product" (1PL, 2015). Respondents did indicate that they feel there is a lot of competition but once again referred to the different market segments (specifically the high-end reserves). "Well, I think it is competition if you look at any of the private camps bordering on any of the National Parks it depends on their product that they are offering. Are they in direct competition with the parks? Are they offering something which is a different market? Someone goes into a National Park, stays at Skukuza, is not going to be the 'chap' who is looking for a 5 star Mala Mala experience" (12SO, 2015)

Other respondents were clear that no competition between government or public conservation areas and their respective private reserves exist. "Geen kompetisie, hoegenaamd nie. 'n Ou gaan Krugerwildtuin toe, dit is weer 'n ander tipe kliënt" (3PS, 2015). Respondents felt that due to the budget driven nature of the public conservation areas they do not focus on customer attracting initiatives and maintenance. "Government has got a budget and government maintains. There is nothing flashy about any Game Park, you come in and it's the same green paint that's been there the last 20 years, because that's on the budget roll and that's what gets painted Everything is well-maintained, but there is no attraction. There is no completion, no unveiling. Government doesn't have to draw anybody because they just put in a budget again and the tax payer will pay" (8PS, 2015). Geographical separation was also mentioned, tourists pick a general area to visit and due to their different conservation areas being based in different areas they do not compete. 9GS "No, most of those non-governmental are outside of Cape Town, most of the tourism market are those wanting to go West Coast or East Coast, touring Langebaan or, and that's generally your private entities are based" (9GS, 2015).

The section uncovered competition, the central force in Porter's five forces model. One of the key criticisms of Porter's five forces model has been that it does not take into account cooperation and complementors (Brandenburger and Nalebuff, 1996).

5.3.5 Cooperation

Cooperation is a strong theme which emerged in the interviews. "I think for the majority of the guys we work with, they work hand in hand with the government. Talk about SANParks and so on, the majority of them work hand in hand with those reserves…" (13SO, 2015). Public-Private Partnership agreements for protected areas has been a strategy followed by the South African Department of Environmental Affairs (Department of Environmental Affairs, 2014). These cooperation agreements were mentioned in the interview and one of the stakeholders interviewed

was a farmer with such an agreement in place. "…entering into partnerships with private landowners, for example, [Place] next door, they have got 3500 hectares. [Place] is 4500 hectares to enter into agreements with them to manage their conservation worthy land on their behalf" (11GS, 2015). These Public-Private Partnerships is positive for conservation and wildlife in the area. "National Parks is obviously an umbrella organisation, but if you look at Kruger where you have a lot of the private landowners or sometimes corporations bordering onto Kruger you know where there is no fencing, they are increasing the size of the conservation area and benefitting from the National Parks animals species which are in that area" (12SO, 2015).

Cooperation goes further than formal agreements. Conservation area managers indicated that they try and foster relationships with other conservation area managers. "I pride myself with the relationship we have with the other conservation organisations in this area, as well as the cooperation and those partnerships we have with the larger estates" (11GS, 2015). As seen in the previous example (where the botanical garden provided access to walks in the nature reserve) increased feet and entrance fees to the park increased the income for the conservation area. Ultimately showing it was not a 'zero-sum' game. These cooperation agreements go even further in the conservation industry through intergovernmental agreements in the form of transfrontier parks. "Transfrontier Parks, Kruger's fence going down in Mozambique, we have got the Rugtersveld National Park, we have got the Kalahari Transfrontier National Park, there are no fences no boundaries. Conservation is about the freedom for the animals move around the areas that they were originally habituated in. There has to be a symbiotic relationship between countries, it's not just the local symbiotic relationship" (12SO, 2015).

Cooperation mentioned by the interviewees did not only include cooperation with other conservation initiatives but also communities and other stakeholders covered in the stakeholder section. Community cooperation was mentioned by many as critical to their survival and cooperation was exceptionally important. "one of our core drivers is that we believe in the communities and the upliftment of the communities through our operating within the wildlife areas so the communities have direct benefit and that's a symbiotic relationship completely and that's we are completely joined in the hip in that regard because they are better suited to delivering that and we are better suited to linking the international guest to some of their projects" (1PL, 2015). Other informal cooperation agreements were also mentioned such as animal exchange programmes and industry associations. "Daar is 'n uitruiling van diere om bloedlyne gesond te hou, want as jy dit nie doen nie, dan stagneer bloedlyne in diere" (3PS, 2015). "Look there are associations all over the place and we are all part of the grading council of SA, the tourism grading council. So all hotels which are graded are part of this and there FEDHASA, so we all belong to

these associations. We are seen as competitors they are going for the same market, but we do have got a common link" (6PL, 2015).

Not all cooperation was positive though, although improving more cooperation was mentioned to be required between national, provincial and municipal conservation areas. Some of the conservation area managers did not feel that there was sufficient cooperation between different bodies. Some municipal conservation area managers felt that national parks conservation area managers were not interested in cooperating with smaller conservation areas. One interviewee proposed a single body responsible for conservation in South Africa (such as the American Parks Services), this would reduce a lot of red tape and cost, improve communication and reduce the animosity by some departments. "…we have been operating for years and very much a silo effect. You have got your national conservation, provincial and local authority… I think it has become much better" (9GS, 2015).

Conservation tourism is just one of the industry options for conservation area managers. Funding conservation areas can be accomplished by moving into different industries. The next section covers the products and services the conservation areas interviewed utilised to fund their conservation business.

5.3.6 Industry selection (products and services offered)

Caution is necessary when classing the conservation tourism industry as one industry. The conservation areas studied indicate various ways to generate income. It is clear that by combining different activities and resource usage agreements the conservation area can carve out a niche and differentiate itself from other conservation or tourism organisations. The diversity of the different activities mentioned by the interviewees listed below also indicate the cross-section of industries that conservation areas can support. Taking into account how important the industry choice is for the profitability of the organisation, this activity should not be seen as a mere 'tick the box' approach. The choice of activities will have major resource commitment and competitive implications.

Table 5.2: Products and services funding conservation areas

Accommodation	**Venue Usage**
• Hotel	• Film and photoshoots
• Lodges	• Gate fees
• Bush lodges	• Braai and picnic facilities
• Tented camps	• Angling area

• Self-catering • Guesthouses • Camping	• Weddings • Conferences • Concerts in the park
Adventure Tourism Activities • Trail running, Mountain Biking, kayaking • Teambuilding • Scuba diving • Balloon safari • Horse trails	**Real Estate** • Private homeownership • Timeshare • Lease agreements **Stakeholder Support** • Government Grants • Friends groups
Conservation Activities • Tours and tour groups • Safari Packages • Game drive • Bird watching and photography • Game walks • Penguin colony • Predator viewing	**Other Tourism Activities** • Shop Basics • Curio shops • Casino • Restaurant • Spa • Transfers
Wildlife Usage and Farming • Hunting • Game breeding and rare species • Game meat • Foraging, sustainable farming • Land use and conservation partnerships	**Education** • Training Academy • Educational walks • Youth camps • Wildlife Centre • Heritage museum or site

Source: Researcher's compilation

Funding mechanisms are critical to the financial sustainability of the conservation tourism industry. However, without communities situated close to the conservation area and other stakeholder's support, running a conservation area will not be possible.

5.4 Stakeholders

Stakeholder management is prevalent in the conservation tourism market. Conservation literature is abounding with references to stakeholders. (Include references) This also filters through to the conservation managers on the ground. The stakeholder management is seen is critical to the

businesses but no specific models are utilised by these conservation area managers when managing for stakeholders. The stakeholder concept was mentioned in a broad sense and specifically when referring to the communities and governmental stakeholders (maybe local businesses). When referring to employees, tourists, suppliers or customers, the respective terms were referred to by the conservation area managers.

5.4.1 Communities

The community came up as a key stakeholder with most conservation areas. Conservation areas are reliant on communities for employees, safety and security and as suppliers to provide for the customers. The conservation areas indicated that they spend a lot of time on building community relationships. “People first,… if they are happy we are happy. If they are not (happy) we are not. Because we have to, it is their future and ours so our relationship in terms of that has to be shared” (8PS, 2015). “I can tell you, number one, in my opinion, is community…we have a very strong relationship with our communities. We have been working with them for years. Through the foundation, we have been building clinics and doing great things for them and go and look at our neighbours our borders the guys on the other side of the fence literally on the other side of the fence that don’t have a community forum they have lost tonnes of rhino” (1PL, 2015).

Employees, as part of the community, also have the same pressures to provide for their families. Some of the conservation area managers feel that by not supporting local communities they may turn to crime. “[place] also privately owned by a number of individuals high net worth individuals they haven’t done as much in the communities and they have suffered from poaching and some of the very drivers of the poaching are their own staff” (1PL, 2015). They see it as managing a potential threat. “Well it is managing a potential threat… Those communities could row over there in their boats and wipe us out, they could clean up all our reefs and kill all the fish… Or, they could support us and be an asset and understand that the revenue generated from that island employs half the people from that community and without that Island half those people wouldn’t have a job. Similar situation in we have a concession with the Massai in Northern Tanzania understand without us, without those concession fees, money going into the village paying for whatever the village wants etc., they have nothing, if they want to they could just switch us off like that…” (1PL, 2015).

Through looking after the stakeholders and by focussing on education, the community can understand the value of the wildlife in the conservation area. 6PL “hunting goes to the communities so you are trying to get the communities to appreciate the animals on the outside so they see each animal which has maybe escaped through the game reserve as an asset. Not to poach it and eat it rather get a hunter to come and do that and hunt it instead of eating a kudu

they will now say we have got asset there, that's value we will look after it. So, from that point of view conservation with the local communities is very important" (6PL, 2015). Employment training is also important for the unemployed communities that reside next to conservation areas. "I have got 300,000 unemployed people that lives next to me if … that needs workshops, that needs training, so we are going to train them" (8PS, 2015). Conservation areas source from the local communities. "We intensively getting the local communities involved to try and we are busy in discussions with the tourism enterprises to see to get the local guys to deliver to one supplier and then we buy vegetables, chicken and eggs from the local communities. We have started looking at uniforms, get supplies, so there is quite a big range of possible suppliers in the area which could help us getting the stuff, but also then supporting the local communities around our lodges. We are busy with that at the moment" (6PL, 2015).

Stakeholders do include not only external stakeholders such as communities but also include internal stakeholders such as employees.

5.4.2 Employees

The importance of employees was mentioned by most of the respondents. Employees are discussed in various sections, while the coverage here is limited, Section 5.6.3 presents a resource perspective to employees "To keep that staff motivated you have got to have good personnel relations. That is the success, I have been told we are a very good team and we can orchestrate all this and not drop the ball" (14GS, 2015). "jou grootste bate is personeel, dan is dit geld, en dan is dit jou bates, jou eiendom…" (3PS, 2015). Intermediaries were another important stakeholder as mentioned by the interviewees.

5.4.3 Tourists

Tourists form a key stakeholder as the conservation area's customer. As the tourist is in most of the interviewees' cases are seen as the customers, responses related to tourism are discussed in section 5.3.3.1 under customer power. Three of the interviewees would not see tourists as their direct customer. One of these, a municipal area manager, manage a conservation area that is open to the public with little interaction with these stakeholders. In this case, the interviewee indicated they started looking at opportunities in the tourism to assist with funding "To be honest we have only just begun engaging with the tourism industry" (9GS, 2015).

Some of the conservation area managers did supply their opinions on tourism activities but indicated that separate regional offices are responsible for tourism panning "The city… has a separate tourism department, so on this reserve like our other reserves we get involved in our own local tourism stuff our conservation staff are involved with everything" (11GS, 2015). In this

case the planning will be at corporate rather than business level providing an indication that segmenting strategic planning in purely corporate and business planning is not possible as different functions may be delivered at corporate and business levels. Tourism impact on the environment is discussed in section 5.6.

5.4.4 Intermediaries

A limitation of Porter's five forces model is that it does not provide for intermediaries, and intermediaries play a large role in tourism businesses. Interviewees were asked about the importance of intermediaries in their organisations. Most of the respondents indicated the invaluable importance of intermediaries. "Inbound operators, it's massive, because ultimately they are ambassadors for us and selling the products here so they are crucial to what goes on here, without them we don't have really much between us and the outside world" (5So, 2015). From tour operators perspective, Intermediaries' influence differs compared with the different type of resorts on the tour list. With national parks, intermediaries felt they had no influence but with smaller provides they did. "We don't like the fact that national parks have brought in Cattle Barons and Wimpy as their food and beverage suppliers in the past, which just detracts from the whole experience. You have got no choice… we have no influence over them, but if you take independent lodges… We would write a letter and say listen, guys, either jack yourselves up or we are going to have to find an alternative…" (12SO, 2015).

With some smaller operators, the intermediary provides most of their business and maybe, their lifeline. "There is a lodge, [place], and if it wasn't for [tour operator] I think that hotel would have closed down many years ago. We are their biggest client. In season we are there every single day, 10-15 people for 6 weeks, it keeps the hotel open" (12SO, 2015). With other resorts the influence that tour operators have is minimal, they may get small commissions. "We can negotiate if you take national parks and Namibian wildlife resorts, they determining it by the quantity of business we generate. Let's say you generate R250 000 – R500 000 (I don't know what the figure is) with National Parks, they are going to give you 10% commission on rack rate. If we generate enough business to National Parks, there is a tiered scheme off the rack rate, we quote on STO rates, now that is a rack rate, you walk in that is what you are going to pay. We get offered between 10% and 25% depending on the establishment" (12SO, 2015).

5.4.5 Government influence

Government influence in the conservation areas studied is large and exist in various forms. Some of the conservation areas studied are public concerns, so government funding is a lifeline. In this example, the gate fees and lodges only provide R500 000 funding whereas the government

funding came to R7,5 million. “So that’s R7.5 million or odd that’s provincial funding, minus what … gives us, R500 000. So, and there is little bit of salaries, which will pay for the Tourism Officer and the housekeepers and maintenance of the facilities. So the upkeep of the trails, the roads… is funded by the Province so the catchment management, cutting down the aliens, putting out the fires and doing the infrastructure maintenance” (14GS, 2015).

Government institutions and activities attract tourists to South Africa that assist public and private conservation areas. 1PL “If you said, well they have a function to attract tourism, I think that you in terms of the ambassadors and all the work done by SATOUR etc… which are based through government which allow you to attract your tourists…” (1PL, 2015). “There was a long while ago SA Tourism had an ad that used to talk about SA being a world in one country. You have pretty got everything all in one country, if you actually take it regional we really are a world in a region here we have got everything, from skiing in the mountains, to scuba diving off the coast some of the best fishing in the world” (13SO, 2015). Government decisions can also deter tourism. “I think that where they make bad decisions in the political field it affects us directly, like an example is the visa thing and that kind of stuff.” (1PL, 2015) “For the rest since they introduced this child unabridged birth certificated regulation there was a drop in visits” (12SO, 2015).

The Public-Private Partnership agreements (discussed earlier) is also an example of government involvement. “You are seeing a lot of models which in fact lease land off the government which works really well because the land is sustained for so the land in government hands potentially will remain under conservation” (1PL, 2015). Some other areas where the government as a stakeholder, has an influence on the conservation tourism business includes B-BBEE requirements which one of the private conservation areas found taxing. “[B-B]BEE, dit gaan oor alle tipe wetgewing waaraan jy moet voldoen… BEE is die grootste” (3PS, 2015).

5.4.6 Other stakeholders

The public conservation areas utilise a public comment system before implementing changes to their management plans. “It goes out for public comment. We make changes to the management plan and then we implement for the next 5 years” (11GS, 2015). Conservation area managers also indicate that they join specific associations such as the Farmers’ Association, Fire Protection Association, and other forums. “And then we sit on all the forums like water user’s association, the farmers’ association, the fire protection association, the Botsock. There is management for the forum. So, you get to engage with all the communities in and then you are working with the municipality making inputs into the RDP, and you are working the City, big role player over the skyline over there” (14GS, 2015).

Friends groups in the public conservation areas perform a valuable role and in some case, the conservation area managers indicate that they fund almost all improvement initiatives. “Definitely staffing, that human resource availability we look at, partnerships, ourselves the other City Department, other conservation organisations etc. Friends groups, that’s quite big … They are represented on the protected areas advisory committee … I sit with them on a monthly basis at their monthly committee meetings but there is more a support role then as a coordination and management type of role” (11GS, 2015). Other funding partners such as neighbouring businesses are also key in supporting conservation areas. “Well, one of our partners is [neighbour], which is going to be part of my sort of ‘little partnership funding project thing’… They fund us to the tune of R500 000 every year by agreement for 50 years” (14GS, 2015).

Academic institutions are also mentioned as partners. Two of the interviewed conservation areas have formal agreements with educational institutions. “We have a memorandum of understanding with TUT (Tshwane University of Technology) with the UP (University of Pretoria) and with the National Zoo so there are cooperation between those organisations but no other conservation areas at all” (7GS, 2015).

The public conservation areas have legislation driving stakeholder participation processes. These are not always very easy to implement.

5.4.7 Implementation issues

The difficulty with implementing stakeholder initiatives was also mentioned. “There is supposed to be according to the old Transvaal ordinance the legislation, there is supposed to be a management committee that sits regularly that includes ecologists, reserve staff, people, city council, the public, maybe a vet or two things like that, but that has never gotten off the ground. Ever since I started working here” (7GS, 2015).

Working with stakeholders and implementing stakeholder participation is critical. Managing resources has also surfaced as a crucial component of what conservation area managers do and plan for.

5.5 Resource perspective

Although planning for the external environment is critical for conservation areas, the link with internal planning is also critical. The external and internal split is hardly a definite line (as can be seen by the discussion of various internal activities and resources in the previous stakeholder section). Internal management includes decisions such as capital allocation as well as activities business conduct. The resource endowments are highlighted as a critical variable by the

respondents. “There is not much you can do, I mean in the ocean you swim or float, because of your surroundings your location you got to deal with what you got” (8PS, 2015).

The following sections will look at various critical resources and their role in the conservation managers planning.

5.5.1 Financial resources

Financial resources are fundamental to run a conservation tourism business. The financial resource discussions were grouped in sources of capital and running costs of the organisation.

5.5.1.1 Sources of capital

A key strategic consideration when establishing a business or conservation area is the capital requirement and the sources of capital. The conservation industry is unique in that investors acquire them for very different reasons. The respondents indicated various reasons including philanthropy, business, residential, conservation, farming, why private and public conservation areas are established. “It’s a very sexy industry, maybe I should put it that way, very sexy industry. A lot of people are in it not necessarily for the to take profits so you are getting a lot of people investing in it, simply, because it looks so good from the outside, but it is a tough industry. So, if you said to me are all operators financially viable, they are not, so from that aspect, yes, that is why I used the word sexy” (1PL, 2015)

A diverse range of reasons for the establishment of conservation areas makes for a variety of sources of capital, including government funding, private funding and public ownership. Some of the privately funded areas made it clear it was initially funded by the owner but they are required to make a return to cover costs. “Initially it was through our shareholders, and then from there we found our own, so all our capital requirements right now are funded within.” (1PL, 2015). “So, heel aan die begin, het hulle die maatskappy gekoop en dit is waar die funds vandaan gekom het, en ongelukkig betaal ons vandag nog ‘n premie, en ek dink ons sal maar altyd ‘n premie betaal vir oorsese, want daardie geld het alles van Italië afgekom. So daardie premie sal ons maar altyd betaal, maar alles wat ons hier doen, is ons self verantwoordelik voor” (3PS, 2015). Funding from the owners farming operations was also indicated as a source. “Dit het van die plaas afgekom van die boerdery” (15PS, 2015).

Bank loans were mentioned as a funding method and some of the conservation areas utilised bank funding for expansion, which, in turn needs to be covered by operating income. “daardie koffiewinkel, hierdie area, hierdie swembad, was 3 jaar terug R4.5 miljoen. Nou ja, jy kan, dit is, as jy dit moet vergelyk aan as jy ‘n huis bou, kan jy dit oor 20 jaar afbetaal” (3PS, 2015).

Respondents indicated that bank loans are hard to acquire by nature reserves and require a large deposit due to the risk attached to South African land ownership. “banks not giving out loans for farm property, you have to come up with 50% deposit for them to loan you the money. It is very difficult to buy or sell at the moment. People can’t sell their game farms because there is no financing and we are not talking about half a million we are talking about 3.4 million [Rand] for the property that you want to buy. There are far better investments” (8PS, 2015).

Public funding is also provided at various levels of budgetary allocation depends on the project size. The national government, provincial and municipal budgets are utilised interchangeably. “Education centre… that was funded from the Department of Environmental Affairs, so it was a EPWP project, Public Works, phase two and three is additional portions onto the building. We would need to source funding from City and maybe external” (9GS, 2015). Many of the public conservation areas in South Africa have established friends groups who provide capital funding and investment for certain capital projects such as bird hides, walkways and equipment. “They replaced the boardwalk of R80 000, they have given us a donation this year of R50 000 towards firefighting equipment” (11GS, 2015).

5.5.1.2 Running cost, profit and surplus

The respondents had a range of opinions and results on the financial sustainability of conservation areas. Some respondents indicated conservation areas cannot be run profitably where others indicate it is a requirement by the owners and they have to turn a profit. Public conservation area managers specifically feel that it is not possible to make money from conservation. “I don’t think any conservation area is financially sustainable, I think if you interview all the nature reserves you will get the same answer. That’s usually most our nature reserves and national parks run at a loss, so the focus is largely on attracting tourists and creating that opportunities and so on, and I think a lot of parks and protected areas make the mistake where they actually promote tourism more than conservation but it is a key issue. I don’t know how it is going to be addressed, but it is one of those things where you need to generate an income to manage your reserve and how to do it appropriately and sustainably is a big question” (9GS, 2015).

The private conservation industry is not an easy industry to be part of. When considering from setting up the private conservation business, competing with public conservation areas as well as philanthropic or residential operations that are not required to make an income. “it is quite a tough game, therefore some operators are profitable an some aren’t. To give you an example, if you look at like you get these rich businesses or people that will own a lodge like… Mala Mala or Branson’s one, they don’t have to make a profit, you know, because the bigger company, the core industry, is going to cover the losses and it’s probably a tax write off but for a company like us,

that is our core business. Now we have to compete against somebody who doesn't really have to make a profit, makes it difficult" (1PL, 2015).

One of the operators indicated that their business sustainability has been threatened by financial stability. The business was however able to turn around the situation. "Not up until 2 years ago, we had to pull it out, we are the brink of having to sell everything off and if it had to it had to come through public auction, that's where we were" (8PS, 2015). An operator that runs a timeshare resort has indicated that the financial model puts a strain on covering operational expenses. 3PS "Cash flow in a timeshare resort, or on a timeshare resort, is always a challenge, want jy sit met 400 gaste daar wat nie betaal nie" (3PS, 2015).

A multi-business operator has indicated that a broad range of results exists between different properties. This is also quite evident by looking at the range of results of public organisations such as different national parks properties. "there are gems within it, so, for example, if you look at the [Place] group within the Sabi Sands is very profitable, [Place] outside the Sabi Sands might not be. They have got an operations Zimbabwe in Kruger and up in Tanzania, and Tanzania is also turning around. They seem to be doing reasonably well, except their outlay depends on what you are looking at in terms of profitability, the cost of getting in is anything to go by, no, you won't make your money" (1PL, 2015).

Some of the operators have indicated that they can provide profit and/or income to investors. The possibility of generating an income from a conservation tourism operation is notably possible. It is critical to understand what it takes to run a successful conservation tourism area to keep and increase land for conservation. "Oh I See, I think we are lucky on the basis we are not heavy geared our organisation. There are no borrowings against the properties we own and we are providing a return for the guys" (6PL, 2015). One operator has indicated that they are quite heavily geared to debt, but are still able to yield a return for the foreign owner. "ongelukkig betaal ons vandag nog 'n premie en ek dink ons sal maar altyd 'n premie betaal" (3PS, 2015).

Public conservation areas are run on a very different basis. The respondents indicate that they are provided budgets by their respective departments to cover major category expenses. Some of the budgets are dependent on tender processes making it very difficult to cover ad hoc expenses and reduces the ability to react quickly. "We get allocated a budget by council and that goes to the branch and it gets split into different regions. We are four regions, we fall under in the north area. Each nature reserve has got a budget that they need to work with. Then we get external funding like our ward allocations, money that's coming for working wetlands, working for water, working on Fire, to do aid and clearing and fire management, and that type of thing. We

largely depend on, especially on, the invasive species, on the external funding, to get the reserve cleared of the invasive species" (9GS, 2015).

Most of the public area respondents interviewed indicate that they have an established friends group. Friends groups assist in covering ad hoc expenses that are not budgeted for. One of the areas interviewed boasted a strong friends group with a large surplus that supports the conservation area with various capital projects, reducing strain on their budget. "we had to call in the helicopter that was an unallocated expense of R56 000 which the Friends covered without batting an eyelid… It's all money that has been given to the reserve that I haven't had to spend out of our operating budget" (11GS, 2015). The public conservation areas interviewed did not find that they were required to breakeven and cover the expenses from tourism activities. "I think the very nature of how we are structured, we are not forced to breakeven at this stage. The view and the opinion I have is that the City views the city parks and our nature reserves as places for people to come for relaxation" (11GS, 2015).

It is clear conservation areas requires capital funding as well as cash flow for operational activities to run a successful business. The conservation area itself is, however, a resource or natural asset.

5.5.2 Natural assets

Natural assets are very important to the conservation area. Tourists' motives to visit conservation destinations in many cases include the wildlife. "ultimately what it is based on is your animals, I mean without the animals we have no industry. Majority of the people are not going out to look at the trees and the fauna and the grasses. It's the animals and if we can't manage that we can't manage the land then essentially there is no industry" (5SO, 2015). By offering the 'Big 5' a resort can market to a certain target market and provide full safari type packages. It may be as simple as having lions, for example the lion park which draw large crowds to view just one of the 'Big 5'. 8PS "Location and then that magic factor that we spoke about… The 'Big 5', nowhere else has got that right in the heart of Gauteng. More money gets generated in Gauteng than anywhere else in the country. So that combination becomes magic" (8PS, 2015). "I know the Serengeti yes let look at the Big 5, wonderful, let's have a look at South Luangwa and see a Carmine Bee Eater, gee and leopards" (12SO, 2015).

The conservation area as a natural asset provides for tourist demand, and it offers a natural asset that can be turned into a destination tourists want to visit, and it can provide drawcards. It may, however, due to its location provide resource challenges for the conservation area manager.

5.5.2.1 Location and tourist demand

Respondents indicated that the location of the conservation area is key to its success. Some of the conservation areas are successful due to their close distance to major urban areas, other areas due to the biome, or even its remoteness from urban areas. “if you are not in the right area you won’t cut it. I mean, it’s a known fact the Waterberg, for example, has a hard time financially. They go after an SA market simply because they are not attracting the international guests who are obviously paying a huge amount (more than the locals), so you want to be in areas like the Sabi Sands which is a very international support base, which gives you more of a chance but very difficult to enter (barriers in terms of finances), so that’s where that element plays a massive role” (1PL, 2015). In some instance, the tourists are specifically looking for new undiscovered areas to explore. “you have been to Namibia now you have seen Windhoek, Sosus Vlei ,Etosha and so on, that sort of circle that everyone does. But you love Namibia, so why not experience another part of Namibia, so why not Northern Namibia?” (12SO, 2015).

The location may, however, provide the opportunity to create a destination drawing tourists in its rights, such as the Kruger National Park or Table Mountain.

5.5.2.2 Creating destinations

Creating destinations has come through as critical for tourism-oriented conservation areas. Tour companies sell packages based on destinations and conservation tourism brands are the main features on their tours. “Almost every part, South of the Equator… just off the top of head, Serengeti, Ngoragora, South Luangwa, Chobe, Bagatu, Mahungu, Etosha, Okavango Delta, Kruger, all of the Natal parks, Etala, Hlhluwe, coming down south we do Addo, Karoo National Park, Tsitsikama, Fish River, Kalahari. So all of those areas I mentioned now, and I missed a few, we include in our packages” (12SO, 2015). The concept of tourists having a ‘bucket list’ of places to go to, surfaced. “If I had to speak to you now and I say to you ‘listen here what park is of interest to you?’ What immediately comes to your mind? Kruger, Etosha, Serengeti, but those are areas that you know that you are aware of. So, you go ‘ah, Serengeti, I must go there, because it is one of those bucket list destination I have to see before I die’ type thing. So, Serengeti is something we can promote, people know it and it is recognised” (12SO, 2015).

Respondents indicate that it is not easy for smaller private conservation areas to create a tourist destination. It takes many years and a lot of money to create destinations unless organisations have the means to do so (such as government capital). “And then I mean the Zulu King will never catch up to the Kruger, they have got a hundred years above us. They don’t come to the Cape, they come to Cape Town. You know there is a destination centre to us. So you can open up a

new area tomorrow but it will take 10, 15, 20 years to become a destination unless you pump in a lot of money, and I mean, lot like Maropeng and Cradle and those guys that had billions pushed in to make it a destination…. But in terms of sustainable tourism we belong to fair trade, fair trade is quite a big thing in Europe... All of them say 'don't become a business name become a destination', become part of a destination" (8PS, 2015).

The smaller municipal conservation areas also struggle with a similar problem. The big-name conservation areas, such as the Kruger National Park, draw many of the tourists through their branding. Local municipal reserves have smaller budgets designed to reach local residents in their areas. "It would be nice if the tourists would be more visible visiting the local nature reserves as national parks, but I think it is all around marketing and what is out there. Fortunately, that is why the tourists come, Table Mountain National Park is one the top places/destinations to be" (9GS, 2015). Tour groups do, however, include lesser-known areas for the tourists who have visited the well-known areas already and to create differentiation from competitors. "When I started my travels, 20 odd years ago in tourism, I would always drive past this sign that said South Luangwa, now have you heard of South Luangwa? *Interviewer:* "No" *12SO:* Exactly" (12SO, 2015). Respondents indicated that drawcards in the area can create demand for tourists.

5.5.2.3 Creating drawcards

Where it is ideal to be a destination, the utilisation of drawcards to attract clients is also very important. "No, obviously those are drawcards for certain people with certain interests, tourists want to go and see something… Steenbras, for example, they have the Crystal Pools and the walk-way so that's a drawcard. Blaauwberg has the Blaauwberg Hill so there is a few of those, a handful of our city nature reserves that have a drawcard" (9GS, 2015). Conservation areas can construct drawcards such as visitor centres to attract tourists if they do not currently exist. "We have a vision where we would like to see ourselves… For example, the education centre is one of them. It's in Phase One we are looking at Phase Two and Three which will then complete the building but the longterm vision for that and the reserve, and the area as whole is that we make it as operational, utilised in various ways, workshops, education programmes meeting space create the vibrancy around it" (9GS, 2015).

Although location and its drawcards are critical to creating tourist demand, remote locations that tourists aspire to visit may cause logistical issues. Location can restrict access to resources.

5.5.2.4 Location and access to resources

The conservation areas in areas such as the Greater Kruger area do experience advantages due to their conservation locality. The location also provides a stumbling block in that it can reduce

profitability due to supply sourcing cost and the lack of competition among suppliers in rural areas. The availability of these resources in the rural areas is also sometimes irregular. “Yes, so that’s the, I think your location has got to do with your access to resources and the costs of having these resources” (8PS, 2015). Some reserves utilise this shortage of amenities and resources as part of the experience, by, for instance, creating outdoor experiences such as campfires and outside amenities for the tourists. “Kalahari, they run on generators, there is solar, they run on generators obviously after dark till 22:00 at night then everything goes off and at 06:00 in the morning these things come back on again, but that is all part of the bush experience in my opinion” (12SO, 2015).

Natural assets provide the opportunity to create destinations and drawcards. Employees, introduced as part of the stakeholder section, is the critical resource that, not only manage these precious assets but also provide services to the tourists.

5.5.3 Employees

The respondents also very clearly highlight that their staff is the primary resource they manage. The managers spend a significant amount of time managing people “Definitely staffing, human resource availability” (11GS, 2015), and “Well, obviously it is people, money, equipment…” (14GS, 2015). A key issue the conservation area managers mentioned is staffing. Due to the rural nature of conservation areas, the sourcing of trained staff becomes difficult and expensive. “is the most expensive resource you can have, access to skilled labour is a huge problem. Training people is extremely expensive and time-consuming. Here you have a person who is good at presenting it to you, but they have a resource pool that they can draw tens of people from I can maybe draw two of them and then I have to train them” (8PS, 2015).

Staffing offers organisations a competitive advantage over other resorts. The respondents clearly highlight how important trained staff is in running a competitive resort. “…it gives you an advantage” (8PS, 2015). It is, however, important that we do not just keep eyes on the competition but on nurturing our people and their customer relationships. 15PS “Ek beskou dit meer vanuit ‘n hulpbron-hoekpunt af, omdat dit my unieke aspek is en hoe meer ‘n mens dit sterk maak en goed versorg, hoe meer mense gaan ons lok om dan nou meer kompeterend te wees op die ou einde van die dag. Maar dit sal iemand niks help om die heeltyd die kompetisie dop te hou nie. Doen wat jy doen en doen dit goed!” (15PS, 2015).

Staff is an asset for the business that can provide a sustainable competitive advantage. The accommodation units can also provide a competitive advantage to the conservation area as the tourist take the offering into account before booking their holiday.

5.5.4 Type of accommodation

The respondents emphasise that the type and quality of the accommodation play a big role in the selection of the conservation area they decide to visit. Tours are planned according to the grade of accommodation and the tourist budget. “Sometimes it does come down to accommodation facilities, there are certain camps that we wouldn’t use. I was absolutely amazed, we opened up a route last year… so the facilities are really good and the accommodation standard good so we have no problem putting people into that area” (12SO, 2015). The client also influences their accommodation and to sell well-known accommodation as part of a tour does seem to provide an advantage. “they both are well-known, well-trodden ground, big hotels this is a little lodge on the side of the river, so it depends on the client about what there” (12SO, 2015). The size of the hotel, amenities, upkeep, service and restaurant all play a very important role. “It depends again of the size of the hotel. Some of the properties might not have restaurants, might not have kitchens so you then become a pure hotel operation where you only basically look at reception staff, reservation staff, accounts and then staff housekeeping staff. When you take game lodges suddenly you are now in a new dimension because now you are running sewage works so you talk serious engineers looking after your waterworks your powersupply going into your property and then maintenance has to be done on the property… It depends on how many bedrooms you have got. We working on ratios of how many rooms they clean how many tables one waiter handles and what you are offering. Are you offering room service after 22:00 at night, twenty-four hours? As a 5 star hotel, a chef must be available, a waiter must be available. It depends on your location and the size of the hotel” (6PL, 2015).

Accommodation and natural assets require upkeep. Managing operation resources are one of the primary roles of the conservation area manager.

5.5.5 Upkeep and operational resources

Upkeep of the resources is very important and the respondents indicated that upkeep is one of the main focus areas of their resource strategy. 7GS “Yes, so if the place is well run and facilities kept clean and neat and tidy, and it looks as if there is ‘onderhoud’ then you get more than you paid for” (7GS, 2015). The upkeep and the provision of operational resources are very important to the conservation areas. The respondents highlighted the broad range of resource they end up managing day-to-day and for the future. Operational resources provide them with an advantage over the competitors. “Well, operational resources, so vehicles, we have got 4 vehicles and manpower. For example, we knew that 2 vehicles had to go in for some body work, so that leaves us with 2 vehicles of which one of that is the education offices vehicle and then the operational off-road 4x4. Keeping that in mind, today there is a fire awareness campaign and we had to recruit

volunteers, community members, etc. In most of cases we would be going physically to collect this people with this vehicle and take them to point X, etc. And then over above that who is assisting, because you can't just have one person and a hundred and odd other people. There is a collaborative effort of resources and the activities you see here is around, what is available that can be done with the resources, and where do we need to pool everything for some resources" (9GS, 2015).

The sections in Chapter 5 to this point addressed strategic management frameworks and the business management perspective of conservation area management. Conservation activities are, however, fundamental to the conservation area managers role.

5.6 Conservation

Conservation initiatives differ from location to location and depend on the ownership or user agreement. Tourist operations within national parks have limited influence on conservation initiatives within these parks. "We operate in Tunapa, Tanzania National Parks. We have to adjust to their rules and their systems so we have less say so we will fit in with what has to be done that's has been… by that government or institution. Whereas, if we operate our own park, say, for example at [place], we have full say over conservation and the land use to a large degree so long as it stays within the wildlife context all the lodge" (1PL, 2015).

5.6.1 Conservation objective

The concept of a conservation objective was difficult for some respondents to identify with and they could not readily come up with and answer. "Wow, dis bietjie moeilik. Ek het nog nooit rerig so daaraan gedink nie, want ek voer maar net die opdragte wat vir my gegee word uit. Maar dit sal maar meestal wees om te conserve" (3PS, 2015). Conservation in a broad sense was mentioned and it was indicated that different lodges in a multi-property conservation company has different objectives. Making it important not to just look at the objective from head office but bringing it to the operations on the ground. "I think as a group, as broad strokes we want to try and contribute to conservation where we can, and then we, per region and per lodge, we would dissect and assess our opportunities `cause each lodge would provide us with different conservation opportunities" (1PL, 2015).

Biodiversity was the most mentioned objective and government-owned conservation areas came up with the concept most readily. "Biodiversity, mainly and then trying to sustain the species that is here and not lose any species, that is the main objective" (7GS, 2015). Biodiversity was coupled with other concepts like heritage, preservation of historical buildings, education as well as maintaining systems and processes. "It is biodiversity conservation and largely includes the

heritage aspects and the cultural heritage of the area as well… We have got Khoisan and all the old farm buildings and historic buildings and that type of thing, so our key one for this reserve is biodiversity and heritage conservation… a lot of what we do is engagement, education, awareness" (9GS, 2015). "the biodiversity and the maintaining systems and processes. Then there is, they have identified this as separate its sound catchment management, this is all about the water" (14GS, 2015).

An objective to preserve the area in the state it was before human interference was mentioned by the respondents, ecological, and environmental restoration, and upkeep, is also mentioned. "Our primary objective is to maintain the natural ecological processes of our particular vegetation type, the Cape Winelands Fynbos and the Swartland Rhenoster Veld, so, in order to make sure those processes of those two vegetation types continue and that means managing fire, managing plants managing animals to ensure those objectives are met" (11GS, 2015).

Although most interviewees indicated, their primary role is to manage and preserve the land under conservation. There does seem to be an indication that at least some conservation area managers specifically look at increasing the land under management. "We are often accused of being land greedy in the City, we want every little bit of green land, and we do try and take whatever we can. Whether that is entering into partnerships with private landowners for example [Place] next door, they have got 3500 hectares, [Place] is 4500 hectares to enter into agreements with them to manage their conservation worthy land on their behalf" (11GS, 2015). One of the interviewees has owned a piece of land managed by the provincial conservation body. The best example of conservation expansion in the sample included a recently established biosphere reserve, expanding the land under conservation to the buffer zone. The conservation area manager has specific duties to meet with local stakeholders regularly for this expanded conservation initiative.

Further to the expansion of conservation areas, some respondents indicated they actively need to stop urban encroachment. One interviewee indicated he specifically constructed an animal enclosure on a piece of land to stop urban sprawl; the Municipality was interested in developing a residential area. The respondents were asked to indicate how they plan conservation resources and activities.

5.6.2 Conservation planning

When it comes to the planning process it is difficult to identify a single planning method the respondents use. Respondents indicate that the differences in the type of conservation agreements demand different planning approaches. Owned properties require direct conservation

planning, where properties based in other reserves utilises a more indirect approach. “We have a mix, some properties we actively manage and others we have no say, and that’s when we operate within their national parks. So, our property in the Kruger, the Kruger Park manages it for us...” (1PL, 2015). Most of the areas seem to utilise an ‘adaptive type’ strategic management approach.

A respondent (3PS) described their approach managed by students. The students are requested to do field research and see what is required to improve their area of responsibility. “in ons beplanning sal ons surveys doen” (3PS, 2015). Their research is handed in as a project and then passed on to management who approves a budget to the projects. Projects are run on a three-month basis and checked for effectiveness. When prompted if this is ‘adaptive management’ the respondent was quite reluctant to use the phrase ‘adaptive management’ and indicated it has a negative perception. “Hulle gebruik en misbruik daardie ‘phrase’ van ‘adaptive management’. Ek wil nie rêrig daardie naam by dit sit nie… Kom ons sê ‘adaptive management’, hulle het nie lus om ‘n projek in hierdie ‘way’ te doen nie, dan sal hulle nie eweskielik sê ons het nie die funding daarvoor nie, ons doen dit nou hierdie ‘way’. Dan is dit die way hoe hy dit oorspronklik wou doen, dan werk dit nie, dan sê hy nee, maar dis ‘adaptive management’” (3PS, 2015).

A participant noted that they use an in house developed system to plan block management and burns for specific areas on the conservation area. It is noteworthy that in this case the respondent did his Master’s degree on the ecology of the conservation area and was well versed in the ecology of the area. “There is tools that we have developed a like excel ‘thingy’s’ which help. The whole reserve is divided in to bite sizes and there must about 200 of these units that have unique management and as I say they come around every 3 years so you might have to do a fire belt every third year in a particular unit which is like a little compartment. And there might monitoring in it, or it might need to be burnt like a mosaic patchwork to manage the vegetation” (14GS, 2015).

5.6.3 Conservation activities

When prompted to identify if the conservation area managers manage the areas actively or with very little interference a range of answers were received. Some indicate they actively manage the conservation areas. “Well, we actively manage it to try and keep it in its natural state” (1Pl, 2015). Others indicated that they try to interfere very little with nature. “ons probeer so min as moontlik ‘interfere’ met ‘nature’” (3PS, 2015).

The size of the conservation area does seem to make a difference to the amount of land that may be actively managed. “We are active, we are hands-on. Due to the size of the area, we have to be hands-on. When I was up in the Kalahari I had 330 000, hectares it was myself and 4 field

rangers. We were virtually hands-off, we managed waterfall game, we managed the international fence between ourselves and Namibia. The rest was hands-off but we could do that because of the size. Here it is far more intense, hands on every day, high number of staff." (11GS, 2015). Invasive plants and fire management surfaced in most of the responses by interviewees. "Invasive plants, unnatural fires and people not going where they should be going. If everybody stayed on the footpath that would be great, but people tend to do their own things, so we need to manage people, so definitely in that order. Invasive, fires and people" (11GS, 2015).

The human aspect of the conservation areas seems to demand a high level of management. Some respondents of the conservation area managers classed manmade structure management such as roads with conservation management. "There is certain aspects we actively manage and there are others we leave. Actively manage like footpaths, roads, all the tracks, waste removal, alien clearing, clearing of invasive plants, those are the types of things that we are physically involved in, erosion management, that kind of stuff. The other aspect is we want to allow the environment to do what it needs to do and in doing that we still need to monitor" (9GS, 2015). "manging the visitors and visitor activity, it's a large part, getting people to stay to the rules and regulations of the reserve and so on" (7GS, 2015).

The management of conservation area fixed assets such as bird hides and entrance buildings are also attributed to conservation management. "Maintaining all the roads for the visitors and for getting to the areas where you need to work, then all the infrastructure, the buildings ablution blocks, bird hides, 'lapas', entrance buildings anything like that manage all the infrastructure you have got on the reserve…" (7GS, 2015).

The management of wildlife was mentioned in various responses, this included mainly larger mammal species and their upkeep, feeding, management, exchange and sale. "do birding, regular game counts, culling, hunting game capture if we need to remove animals, sustain biodiversity, get new blood in if we need to, manage the predators, where they go, what they catch, like the cheetah. Extra feeding of the hippo, buffalo and rhino in winter times, putting out salt in winter, we don't really have artificial watering holes, the vlei in the wetlands is 8km long and goes straight through the reserve so we don't have any of that…" (7GS, 2015) and "you can sell one Eland and buy five blesbok and replace whatever has been taken off. The eland population is just growing you can sell one buffalo and buy a 1000 blesbok and replace whatever you have" (7GS, 2015).

Research and surveys are mentioned as activities that are conducted during the managers' daily activities. 3PS "Ons sal ons beste probeer om erosie te voorkom… Dan het ons 'surveys' wat ons doen op die diere, kyk dat hulle 'ok' is. As die diere siek is dan word hulle gaan haal, ons vat hulle

'wildlife centre' toe, probleem plante uithaal, probleem bome uithaal, dis maar meestal sulke goedjies wat ons doen… Nou word daardie heining omgehardloop en hy is deur na die ander ou se plaas toe, dan verloor ons weer daardie een. So diere wat ons heinings om hardloop en dan brande is ook 'n groot problem" (3PS, 2015) "research was done managed to have worked out some sort of system on working out how much pressure there was on the leopards and whether you could hunt there or not" (1PL, 2015).

The list of activities that conservation areas regarded as conservation activities they participate in include the following:

- Wildlife centres;
- Fire management (fire protection, block burning);
- Visitor activities (game drives, cheetah interaction, junior rangers);
- Property management (fencing, erosion, hides, buildings, lapa, entrance, footpaths, roads);
- Wildlife management (selling, swopping, bloodlines, game counts, rhino relocations);
- Predator management;
- Alien plant management (invasive species management); and
- Research.

The list indicates the daily activities the conservation area manager is tasked with and indicates the issues they are dealing with. The next section will cover the issues conservation area managers deal with regularly.

5.6.4 Conservation issues

Funding for conservation was mentioned as another key conservation issue. The importance to find funding and to develop funding methods is shown to be exceptionally important. "Conservation is always unfunded, we don't have money to buy capital stuff, you know, like things that cost 100k, 200k, 300k like a new boat, because we do the, all the law enforcement, the whole abalone poaching thing… Yes, so funding is number one" (14GS, 2015). It is mentioned that using tourism-generated funds for conservation is difficult as it does not provide a return on investment. "Die fondse, die kostes om dit te doen, ek meen, dis al klaar 'n groot taak om die toerismebedryf te onderhou, maar om van die toerismebedryf se inkomste te gebruik om die indringerplante te

beheer, is nog ‘n groter uitdaging en daardie uitgawes kan nie terug gekry word nie. So dit maak amper nie eers sin nie” (15PS, 2015).

Although funding was indicated to differ between public and private, the lack of funding is mentioned by both public and private respondents. “Funding as well is massive I think in the parks. In the private reserves, it is a little different because they generally not having to rely on government funding it is privately owned so whatever maintenance gets done gets done through private funding… National Parks probably have issues with funding. If you have got enough money you can do anything” (5SO, 2015).

The fragmentation between different conservation initiatives was mentioned. Municipal conservation area managers felt that national and provincial area managers do not work together with municipal reserves. “The big problem in conservation in SA is fragmentation, even though we are just a couple kilometres away from provincial reserves, there is no communication there is no overall body that talks to everybody and that manages conservation in the country. So, SANParks under a national environment, the provincial authorities with their own reserves local government and the private sector, there is no cohesion between any of these things and everybody does their own thing and thinks they are right so it’s very difficult… There is a big attitude thing in conservation, the fragmentation is a major problem. All the places think they are doing the right thing and they are doing it in isolation and it might not be part of the whole metapopulation management plan for the species” (7GS, 2015).

One respondent proposed a national parks reserve structure similar to the United States where all park rangers work together. The conservation area managers mentioned that siloed thinking and lack of communication and working together, as well as resource allocation made this a big problem. “I have always been the advocate to try and replicate the National Parks Service in the ‘States’ where they have one conservation organisation looking after municipal type resources, looking after Yellowstone National Park and I still believe that model could work in this country then all of your resources are pooled all of your financial resources are in one place and I think that would make more sense, my personal opinion” (11GS, 2015).

The human need for land, human expansion and development are also mentioned as a key issue for conservation. “Something like the rhino project, so the threat is the species, where we can get involved or like we have, we have done some work in India, we have translocated or, [person], he has done a whole lot of work with the Indian conservation authorities. For us, at the moment our biggest threat is probably people, communities, threat from the Massai cattle onto our concessions, threat from fishing, fisherman overfishing our coral reefs at our lodges on the sea

that kind of stuff. So human in fact is probably our biggest threat, cause poaching is a human aspect as well" (1PL, 2015).

Poaching is also a key theme highlighted by respondents. The preservation of the rhino was mentioned by most respondents in some form or another. "From the conservation side of it at the moment it's the poaching threat that's a major component, and then from conservation and tourism combined its budget constraints, personnel and the other big thing is advertising. We don't have any funding for advertising and unfortunately, the city council don't spend a lot of money on advertising" (7GS, 2015). A respondent recognised that poaching may be reduced by flooding the market with rhino horn stockpiles, a strategy that has been discussed at a national level. "let's take rhino horn, for example, I think we missed the trick with rhino horn and with ivory. We have stockpiles which we could a) flood the market and b) utilise some of the revenue for conservation projects, which we are not" (11GS, 2015).

The following is a list of conservation issues respondents emphasized during the interviews:

- Funding (advertising, budgets, staff capacity, policies reducing tourist number);
- Poaching, overfishing, illegal hunting, illegal harvesting;
- Endangered species (rhino);
- Invasive alien plants;
- Fragmented conservation industry (lack of working together between national, provincial, municipal and private reserves);
- Population encroachment, agricultural land demand, housing land demand, land invasion and development;
- Wild and accidental fires;
- Carrying capacity (elephant population and property size, determining hunting quotas);
- Lion hunting;
- Genetic diversity (cheetah and lion DNA genetic pool); and
- Safari operator respect for the environment.

Finally, it is necessary to comprehend how respondents measure the success of their conservation initiatives.

5.6.5 Conservation success measures

Interviewees' responses offered the following: research and reporting is indicated as a tool for measurements "we take a lot of our cue from the scientific world, so we, through the research that is done" (1PL, 2015). "Ons sal dan 'n rapport skryf, soos, jy het jou metode, skryf jou rapport, sit dit in 'n 'file', doen 'follow ups', dit werk nie. Metode 2, skryf 'n rapport, dieselfde 'file', 'folluw ups'" (3PS, 2015). The budgetary management process does form part of the measures utilised. "Well, if I can get through that work plan and spend all my money, which does include maintenance, you know foot paths and upkeep of the facility and maintaining that 80% occupancy, you know you wouldn't want to see that fall" (14GS, 2015).

Public conservation areas have strict measurement guideline and their responses seem to contract those of the private conservation. Measurement cycles are fixed at one and three-year intervals. "The protected area review is done annually, so we get assessed on everything from beginning to the end, looking at management and resources and so on. And then the net review is done every three years…" (9GS, 2015). 11GS "We have an annual protected area review, and we have three yearly management effectiveness tracking tool process… Every three years we get external consultants to look at our management effectiveness so our protected area review basically looks at how well we are managing the protected area, our MET, the (Management Effectiveness) looks at me as a manager and how well I am managing" (11GS, 2015).

A tool, utilised by the respondents interviewed is fixed point photography. "Deur fotos te neem op 'n gereelde basis, spesifiek van enige erosie naby damme en hoe dit gerehabiliteer word oor tyd en om toesig te hou deur deur die velde te stap om te sien of die indringerplante beheer word, ens." (15PS, 2015). Although this is mentioned by a public conservation area as part of their required report, it is not mentioned by other public conservation areas. "we have got set protocols on how to do fixed points photography, how to do game capture, how to do alien clearing, that type of thing, so we have got protocols in place" (9GS, 2015).

5.7 Current planning practices

The study investigated the planning practices of conservation area managers to understand if the theoretical frameworks and models apply to the conservation tourism industry. Firstly, it is critical to uncover if conservation area managers do conduct strategic planning. Secondly, the study uncovers how these business entities plan. Thirdly, the study indicates how different types of conservation areas such as public or private and different functions conservation vs business

planning differs. Finally, the section highlight the models and frameworks that conservation area managers currently use.

5.7.1 Strategic vs tactical

8PS “Eskom doesn’t send you a strategic bill it’s the same old bill that it has always been, so we still got maintain the core business while we are trying to get a spin-off on this thing, so it that it spins off and builds its own momentum so we can step out of the business.” When looking at the type of planning the conservation areas are doing it is clear that if evaluated, it would be more tactical than strategic in nature. Long range planning is apparent in public and private conservation areas, however, when prompted to explain the content of the planning it’s tactical nature surfaced. “So, the strategic drive would be… fix your funnel, so get that part right, the sales marketing, get your digital stuff and get in with what is current today, and then driving down the inefficiencies and then it gets to operating, and, it used to be operating that we used to, so if the guest was happy we were happy. The sales and marketing was always important but it wasn’t the key driver. We have refocussed that to make it a key driver more recently, so that has been a very big focus” (1PL, 2015).

The centralised planning by the directors at a large hospitality group indicates to what extent the senior management will get involved in tactical planning. “He does it monthly, but he gets his reports daily. He has got a flash report which gets produced daily, which tells him his occupancy. They have got to do a forecast every 10 days. They do a forecast for me every 10 days to tell me what their food cost is. Food cost is the purchases of all the meals minus your closing stock gives you your consumption and that needs to be based on turnover. So we look at food cost, we look at beverage cost and then we look at labour component as part of your turnover and these are industry norms. So when you start look at food cost we normally budget 35%, beverage 30% and labour cost 20% of your overall turnover. When those things starting coming out of sync you need to look at your increasing your revenue or reducing the costs. Then you have an administration cost, we looking at about 7% of total turnover. Your marketing cost we are looking at about 5% and then you have got your utilities cost and that again very dependent on what you are offering. For instance… runs on generators 24 hours. Some of our properties in Africa, the power supply goes away for 3 or 4 days and then we run generators for the whole period, so it depends on that property. Depends on how gas you have got in your kitchens, how much gas you have got in your room when you talking about heating geysers so it is property specific” (6PL, 2015).

The example by 6PL however does not constitute all the planning done in the corporation. Strategic planning does seem to get triggered by big events or capital expenditures. “What we normally do is once you are established you need to increase your bed capacity and that’s by

increasing your occupancies. When we start reaching 70/80% then what we do is we look at remodelling the property itself by increasing the rooms… there is no tool as such" (6PL, 2015). When prompted some of the conservation areas mentioned their budget as the strategic plan for the corporation. Taking the limited tool usage and the processes explained, it is clear that planning in the conservation areas studied is more tactical than strategic by nature, which can be further highlighted by the budget focus of conservation area management.

5.7.1.1 Budgeting vs strategic planning

When discussing the strategic planning some of the managers did seem to include, budgeting process as part of their strategic thinking. The planning for large capital projects in long-range planning within their strategic frameworks was mentioned. "So for example we put quite a substantial amount into our Capex meetings simply because, and our 3 year Capex plan. It's all the short term stuff the replacement of goods, vehicles only last so long, product only lasts so long and we are just going to get a refurbished, we are going to get a rebuild. There's quite a lot but it's based on the financial component" (1PL, 2015). The split for some organisations was not very clear as seen by the inclusion of strategic decisions in budget meetings.

When 1PL was asked whether they conduct strategic planning the interviewee responded "What we do is we do the budgets once a year and then we forecast every 6 months. When we do the budget we sit with the GM, he sits down with his operation, looks at the whole thing and he needs to look at all aspects the labour component, the energy component, the marketing component and then also to see where he can save costs but also increase revenue" (1PL, 2015). So how do the conservation areas currently plan?

5.7.2 Type of planning

To uncover the type of planning conservation areas conduct not only indicates how the planning systems align with theoretical approaches but also how proposed frameworks for conservation area management should be adapted to align with current practices. Four aspects are investigated prescriptive vs emergent, centralised vs decentralised, activity vs resource-based and finally long vs short term planning approaches.

5.7.2.1 Prescriptive vs emergent planning approaches

The businesses interviewed included prescriptive and emergent planning approaches (which were almost evenly split).

5.7.2.1.1 Prescriptive approach

Due to the split of public and private conservation areas the split is skewed by the fact that all the public conservation areas are required to provide a reserve plan and in some cases a tourism plan. “Then we have a 5-year management plan in place then at the end of that 5-year period we review it goes out for public comment we make changes to the management plan and then we implement for the next 5 years” (11GS, 2015). These public management plans include a stakeholder engagement process which is formalised. “We have got the overall or overarching plans for the City’s conservation… on the reserve level we have the Reserve Management Plan… and that goes through an extensive public participation process where we get buy-in from the communities and the ratepayers' organisations and the Eskom’s and the Cape Natures and all of that the West Coast Biodiversity Reserve and that type of thing” (9GS, 2015)

The strategic management approaches discussed were mainly focussed on long-range planning that which ranges between 3 and 5 years. The prescriptive planning approach includes a range of planning milieus from pure long-range budget planning to a more focussed strategic plan. “So that sets our goals and our objectives for the next 5 years. What’s compatible activities that we have got for the Nature Reserve…” (9GS, 2015). Indeed, most of the public area interviewees indicated that the planning was a legal requirement and the impression was that it is conducted to ‘tick the box’. The public park managers do seem to rely on the plans for guidance to make policy decisions, source budget and provide general guidance day-to-day. “If I didn’t have a management plan, … and it is all zoned and budgeted on 5-year cycles. If there wasn’t that boundary I would be quite nervous cause the [place] is quite special. You don’t want like ad-hoc, just because the funding is available…” “a 5-year plan which is projecting and that pretty much gets cast in concrete” (14GS, 2015).

Not only the public institutions had prescriptive planning, but also some of the private corporations. Although the prescriptive planning did provide some guidance as seen above large events seem to occur that either force the managers to alter the plan or replace it. “We definitely have strategic planning. We have just completed a 3 year although that in we are probably going to stay in that 3-year planning phase simply because Ebola took us out for a year we couldn’t do certain aspects of it so we will probably retain it now for another year going forward… this business has been through some real ups and downs over its 20-year period” (1PL, 2015). Which indicated that the conservation area managers found the prescriptive planning helpful and in some cases irreplaceable, the planning, however, requires some flexibility.

5.7.2.1.2 Emergent approach

The flexibility required seem to be possible within even a regulated public environment. Although it was not the general approach to public conservation area mangers, one public area manager did indicate that he updates the management plan almost daily. By taking the 5-year plan and updating it daily the park manager changes the prescriptive approach enforced on him and utilises it in an emergent way. “I do it every day if something changes on the reserve I amend the management plan on a daily basis, so if we do a game count yesterday, the next day I will go and amend the numbers on the management plan if there is any changes. It’s ongoing it is a work document it’s not something you do once and leave we adopt that thing as we get new information. We have a student coming out to do specific things. We get new information and we add that to the management plan” (7GS, 2015). Ultimately creating a living strategy.

This type of emergent strategic plan is also evident in some of the private conservation businesses. The smaller business management practices have a more ad hoc approach to planning, while some more formalised strategic/budget planning was observed in the larger organisations. The planning has however got an emergent quality as the manager indicates past practices being less formal and more formalised planning emerging. “Depends how often the pawpaw hits the fan, (laughter), …no I think quite regularly about two years ago we went on a business to put the business in the direction it's going. Obviously, it is a new strategy so every month we meet and we thrash out the strategy and the direction it is going and the tempo it's going… in the past we never had a defined structure or strategy where we go into. Now everything gets linked to it so if a problem comes up, it is either supported if it doesn’t it gets cut away or dealt with separately or it gets absorbed into and we get it into the system” (8PS, 2015).

5.7.2.2 Centralised vs decentralised

The research indicated how centralised the planning approaches of the conservation areas were. Due to the range of different public and private conservation areas, various forms of planning were present.

5.7.2.2.1 Dual

Public conservation areas have a dual approach to management including a centralised component as well as a decentralised component. “Tourism (Cape Nature) have got a strategic plan, …and we know how much we have on a 3-year cycle. And then we have this 5-year strategic plan and one of them includes tourism” (14GS, 2015). These plans include conservation and management components. The regional plan informs the management plan of the local conservation area. “So there is the Biodiversity Strategy there is council policies and procedures

and strategies that we have to align with and that informs our annual plan of what we can do" (9GS, 2015).

The concept of centralised only has relevance to the larger private corporations, there is evidence that larger private institutions also utilise a dual method to coordinate corporate and business level decisions. "So aspects are driven on the ground and some aspects are driven centrally that's the balance on the conservation side" (1PL, 2015). Some decisions based on the product offering and key functions are managed at a corporate level, where others are planned at a conservation area or regional level. "We are in process of doing is regionalising, so where prior to this, we had a quasi-sort of some regional, some central, we are pushing it more to regional and we are in that process right now. Simple, because the benefits, particularly on the marketing and sales front, is much greater if you are regionally orientated. We do have an element that we do plan for is what we term the 'golden thread' which is your standards being maintained across the group, so our strength in our product lines in that if you go to SA lodge or one our India-based lodges, or if you go to a Tanzania-based lodge, the standards will be in and about the same…" (1PL, 2015)

5.7.2.2.2 Centralised

Other larger private organisations are structured to utilise a centralised planning model. "When we start a new hotel, for instance, I will do the feasibility. For instance, if we say we are going to open a 20 bedroomed hotel in Lapazuka then we know we are going to need a restaurant manager, an F&B manager, but the F&B manager might also be the executive chef because of the size so he has got a dual purpose. Then you are looking at the GM, the marketing, you are looking at reservations; who is going to answer the phone calls? who is going to check in the guests? I have got a sheet of the budget model of what staffing I need, it is actually quite easy" (6PL, 2015).

The literature review introduced the concept of competitive "activity" based planning vs resource-based planning, which method did the conservation area managers use most often?

5.7.2.3 Competitive "activity-based" vs resources

The majority of the conservation areas interviewed found the planning of resources resonated more with them. "If you don't manage that properly there is no point in having competition cause there will be nothing left to compete with otherwise. Yes resource management for sure" (5SO, 2015). The planning currently conducted in the majority of the conservation areas are focussed on the resources rather than the competitive aspect of the business. "Well definitely resources. I mean that's what I am, a manager, I spend 2 days a month on tourism… R7m is all operations so it's a big component is staff doing different conservation operations" (14GS, 2015). Some of the

interviewees found it difficult to interpret concepts of competition and the industry pressures in Michael Porter's 5 forces model. The concepts in these models had to be explained to some of the interviewees, while others misinterpreted the questions.

The resources included the actual conservation land, people, vehicles, fencing and facilities of the conservation area. "I think our focus is more resources at this stage because we have large tracts of land that we are managing. We are proclaiming all our nature reserves now under the Protected Areas Act. So we do need to put staff on the ground, have facilities on the ground like offices and vehicles and fencing and all of the rest. If you don't manage your land effectively you can't promote it for tourism or anything like that" (9GS, 2015). Resources tended to rank higher on conservation area managers' planning and consideration scale. "I think, I tend to look at from our people and our resources than from a competition perspective" (11GS, 2015).

Not all conservation areas ranked resources higher than competition some found that both are important. "Without the one, you can't do the other one. Resources is an important thing to have, be it a bakkie to get from A to B or the people to do the work, etc. To create the environment, to be able to market yourself and be that destination that people want to go to. So, from my point of view, is resources is very important, it is one of the things we struggle with regularly. One of the resources being funding and then with funding comes whatever else you need" (9GS, 2015).

The focus on both resources and competition can be a literal departmental split, where marketing teams responsible for developing and selling tourism products will be focussed on competitive pressures and product development. Therefore the lodge management and conservation staff will be resource focussed. "There are two sides that are at play I mean this business literally is split. We have got a side that gets our guests in and markets and sells and does the booking aspect, and then there is almost a divide because you then move into who operates on the ground and there is a very clear operating difference between the two. These guys are more number focussed data you know getting in volumes this side is making sure we give an absolutely great experience, look after the land ensure that the people are well cared for (both those who work for us as well as our communities) as well as our guests so that there is a much bigger focus on that entity at ground level lodge wise. Whereas the other side is more competitive wise it is who can outsmart who" (1PL, 2015).

5.7.2.4 Long term vs short term

The range of planning terms that the conservation areas focus on differed substantially from the longest range at 6 years, to relatively shorter planning periods. "Well, we've structured it. We have done a 6-year model, it's more a long term model that we have put out and its obviously dependent

on if we broke that down into 3 years, two batches of three years, depending on how far we got with each one. As to what the chance would be that we would tackle but there's a financial model that's been done for 6 years. The deliverables in terms of what's getting down to the actual ground level that's probably a shorter-term that's three years so the 6 years would be more the financial component and probably on the sales and marketing drivers… structuring of your business how much tour operating do you want vs how much bed operating/lodge operating the balance between the two. How do you maximise both?" (1PL, 2015).

The planning include shorter term planning horizons as part of management meetings at different levels. Most conservation areas did seem to have meeting and planning schedules that have been developed over time. The following respondent refers to their HOD (head of department) involvement. "Hierso het ons elke Dinsdag middag, 14:00, sit daar 44 bestuurders, van 'supervisors' tot top bestuurders in een saal en ons hou 'n algemene bestuursvergadering. Elke afdeling is verplig om eenkeer per maand met daardie 'HOD', met sy hele personeel van sy afdeling, moet hy vergadering hou. Elke divisiehoof moet met al sy HODs eenkeer per week 'n vergadering hou en dit gaan maar oor jou KPA. Met ander woorde, in elke ou se KPA is beplanning een van sy 5 hooffaktore" (3PS, 2015).

The type of planning approaches the conservation area managers to employ and to provide a clear indication that different types of conservation areas planned differently. The key differences in these different contexts highlight crucial different planning approaches.

5.7.3 Strategic planning in different contexts

Public and private conservation area planning provides the most distinct differentiation. The study also uncovered the different roles within these conservation areas such as business or tourist and conservation affect planning practices.

5.7.3.1 Private vs public

The prescriptive nature of public planning includes complying with laws and municipal bylaws and is very formal. All public conservation areas are required to have a management plan. "We get assessed on everything from beginning to the end, looking at management and resources and so on. And then the Net Review is done every three years… basically taking the annual plan of operations which is what we put together which we must all do across the City and taking that months' work, work that has been allocated and breaking it down into the different days of the month" (9GS, 2015).

The boundaries between public and private conservation areas are not as clear in the conservation industry as in many others due to the existence of public private partnerships. Operating private conservation initiatives in public protected areas requires the adherence to public planning requirements. “Ja, ons het die bestuursplan wat ons saam met Cape Nature opstel, so dit is die beplanning en daarin word uiteengesit alles omtrent die handhawing en die instandhouding van die veld ens. en wie doen wat. Daardie beplanning word elke jaar gedoen” (15PS, 2015). Whereas private conservation areas with their land have more determination on their planning. “We operate in …National Parks, we have to adjust to their rules and their systems so we have less say, so we will fit in with what has to be done… by that Government or institution. Whereas if we operate our own park, say for example at [place], we have full say over conservation and the land use to a large degree so long as it stays within the wildlife context all the lodges, that’s where we will play more of a role, so it does depend where you are operating, but we do have, that also has a central theme to it, often implemented locally though” (1PL, 2015).

5.7.3.2 Conservation vs business

Public protected areas have a multi-tier approach to planning. The integrated reserve plan includes the conservation aspects as well as business aspects of the conservation area. The annual planning seems to have this planning split. The annual plan of operation together with the protected area, review plans regarding the conservation and business activities separately. “We got an overall integrated reserve management plan for the reserve that covers all aspects of running that particular protected area, then we also have an annual plan of operation to do our day to day tasks and our facilities so we plan when we need to do soil erosion and vegetation monitoring and law enforcement and fires, that type of thing. We also do a protected area review every year, so that’s an annual thing where we look at operations we look at our resources, do we have enough budget? do we have enough staff? is our monitoring programmes in place for the vegetation for the fauna and flora? It covers a wide aspect of managing the protected areas. Then we also do a Net Review, which is every three years, that’s a bigger overall review of your protected area” (9GS, 2015).

The planning levels does not seem to be the same for all levels of public conservation areas. The naming conventions for the plans also differ. “We have got an ecological management plan and we do all our activities according to the ecological management plan for the reserve, so it includes the burning planning, the game culling and capture. All of that is included in that ecological management plan” (7GS, 2015) Some public conservation areas report that the business planning falls within the overarching strategies of the municipality and that the tourism planning is manged from the provincial level. “It’s with all the business planning that we are doing so. All of our management plans our planning for the Nature Reserve, falls into our overarching

strategies and policies for the council, from there we do our subsidiary plans, so it's very much in line with all the national strategies that is out there" (9GS, 2015).

Private reserves and conservation areas have very diverse planning arrangements and are very different if conservation areas are operating within a public protected area, or running their own conservation areas. Planning arrangements include totally integrated, totally separate and multi-tier. "Nee kyk, eerstens is dit deel van die top bestuursvergadering en tweedens syfel dit dan deur na al daardie afdelings toe. Ek bedoel daar is 'n, die Wildlife Centre is 'n afdeling op sy eie, wat ook rapporteer aan die Conservation Manager, so daardie ouens het 'n vergadering op hulle eie. Die Conservation gedeelte self, het ook, is 'n afdeling op sy eie" (3PS, 2015).

5.7.4 Frameworks, models and practices

When prompted to try and understand any specific frameworks or models the interviewees' firms utilise for developing their strategic planning or long-range planning the only framework that was mentioned besides budgeting was the SWOT analysis. "…what is our strengths our weaknesses opportunities and threats? So we review that. It is a working document, we review that every 5 years" (9GS, 2015). The interviewees could not recall a model "I don't know of any model that it based against… No specific model, no…" (1PL, 2015). Most interviewees indicated they did not use any models "Nee ek gebruik nie modelle en sulke dinge nie ek beplan dit maar self. Daar is geen model wat ek gebruik nie" (15PS, 2015). "There is no tool as such" (6PL, 2015).

5.8 Limitations of the analysis and data

Although the study was able to attract some of the significant private conservation organisations as well as municipal and provincial public conservation areas, the study was limited to the stakeholders that agreed to take part in the study. Future studies could include a broader selection of stakeholders.

The conservation organisations interviewed did not include a selection of marine protected area and marine conservation tourist organisations. One of the interviewees had responsibility for a penguin colony and a marine protected area. Future studies could include marine conservation businesses to understand their strategic planning requirements.

5.9 Summary of the research findings

The chapter delivers the results of the stakeholder interviews conducted with key stakeholders in the conservation tourism industry. The stakeholders interviewed included public conservation area managers, private conservation area managers, corporate leaders in the industry, a

marketing agent for the industry, a conservation tour operator and finally a training SETA. The analysis first looked at the macro environment and its impact on the conservation area.

The macro-environmental factors were categorised utilising the PESTLE framework. The framework provided a very good way to categorise the external variables and their impact on the conservation area. The industry environment was measured against Porter's five forces model, and respondents asked specific questions to understand its usefulness in the industry. The threat of substitution and supplier power did not stand out to the interviewees as critically important to the conservation area success. Substitutes in the conservation tourism industry can complement conservation tourism and enhance the tourist experience. Factors besides the five forces proved to be more crucial to conservation tourism business success according to the respondents.

The study investigated the stakeholder approach. The interviewees did indicate that stakeholders are critical to their success. In some cases, it was highlighted as the most critical part of the conservation area success due to its reliance on the communities in rural areas. Intermediaries and government roles not covered in the Five Forces Model were shown to be critical to the conservation area success. Employees were another stakeholder highlighted by interviewees as critical to their success.

The resource perspective provided the most apparent difference between public and private conservation area management. The public conservation areas had direct financial support in the form of friends groups but otherwise are reliant on budget allocation and public sourcing. Private conservation areas mainly financed capital and running cost of the conservation areas through tourism generated income. The study indicated the importance of the destination or creating destinations and drawcards to generate tourist visits.

The analysis indicated that although biodiversity proved to be the primary objective conservation areas manage their conservation areas for, they deal with many management variables during their day to day management and planning. Public conservation areas followed a very prescriptive planning approach, whereas private conservation areas planning used a more emergent approach. The planning approaches were more tactical than strategic, and a limited number of formal models or frameworks were used.

Chapter 6 synthesises the results of the quantitative and qualitative results into a framework for the strategic management of conservation areas. The chapter uncovers the variables that are critical to the success of the conservation area, followed by a systems thinking planning framework to provide an approach to strategic planning for conservation areas.

CHAPTER 6: STRATEGIC PLANNING FRAMEWORK

"The core of strategy work is always the same: discovering the critical factors in a situation and designing a way of coordinating and focusing actions to deal with those factors." ~ Richard Rumelt (2011: 2)

6.1 Introduction

The environmental and business (management) sciences developed different functional tools over the years, although this specialisation incubated the emergence of a quality hospitality service within conservation areas, it has, however, left an integration gap. The study highlighted not only lack of coordination and integration between the roles hospitality/management trained staff and the conservation trained staff, but also management responsibilities entrusted to conservation trained staff with little or no formal management training. The lack of integration is not a problem unique to our time or the conservation field. Strategic management frameworks have developed over time to address just such integration problems. This study proposes a framework not only to address such integration issues but also to provide tools for the conservation tourism organisation to navigate a highly volatile macro environment and industry to deliver sustainable competitive advantage

The research highlights how conservation tourism areas can be strategically managed to grow and fund conservation. The research aims to answer the primary research question "How do conservation businesses strategically plan for long term financial and environmental sustainability taking into account complex environmental, societal, and industry variables, ultimately securing the land for conservation?" utilising a qualitatively driven concurrent mixed-method research design. The research is focussed on developing a strategic framework for conservation areas. Earth, the ecosystems not only the management environment in which this framework function but also serves as the objective or goal of the conservation tourism organisation, making the conservation tourism operation unique compared to other business entities. This goal can be a singular concern or part of multiple objectives, including stakeholders and profits as the raison d'être of the conservation area.

Chapter five provided an analysis of the face-to-face semi-structured stakeholder interviews with the management of conservation areas and other stakeholders. The quantitative environmental perceptions survey analysed in chapter four provides a general public perspective on a range of environmental concerns indicating the state of, pressure on, and how well conservation areas are managed as perceived by the general public. This chapter integrates the two different studies into a strategic framework for the management of conservation tourism business. What constitutes a strategic framework for the management of conservation areas?

6.1.1.1 Why a framework?

According to Porter (1991), two approaches to theory-building have been used to understand the economic questions over the last few decades: Models and Frameworks. On the one hand, we can approach theory building by developing a multitude of situation-specific models. Each relevant to specific scenarios. All with their assumptions. This approach has been characteristic of economic theory over the last few decades.

The second approach will be to incorporate all the learnings from these various models and generate a framework for approaching a situation. A framework best provides insights in complex cases involving many seemingly incompatible variables, giving way for management to approach a problem understanding how various variables affect each other.

Both these approaches to theory building are not mutually exclusive. Models are valuable to get logical consistency and should challenge frameworks and their links to outcomes. Frameworks, in turn, should challenge models highlighting omitted variables and assumptions (Porter, 1991). This study will ultimately develop a strategic framework for conservation tourism to assist in the strategic planning of conservation areas. The research is based on and aims to answer the following research questions highlighted in Chapter 1.

6.1.1.2 Research questions

As highlighted in the introduction, the study aims to answer the primary research question “How do conservation businesses strategically plan for long term financial and environmental sustainability taking into account complex environmental, societal, and industry variables, ultimately securing the land for conservation?” by asking five sub-questions. Chapter 6 will answer each of these sub-questions based on current management research as well as the research results from the primary research findings in Chapter 4 and 5.

The chapter is laid out according to the sub-questions, Section 6.2 answer the question “What environmental, societal, industry and business variables has a substantial impact on conservation area success?” Providing an overall view of the variables involved in the strategic management of conservation areas highlighted by the research.

Section 6.3 answers the question “Does the contemporary strategic planning frameworks utilised in management and environmental sciences address the strategic planning needs of conservation area managers?” by taking the variables highlighted in Section 6.2 and comparing it to current management and conservation management thinking to understand if general strategic management frameworks address all the variables conservation area management require.

Section 6.4 answer the question “What variables do conservation area managers need to consider in their plan to remain sustainable in a competitive environment while preserving environmental integrity?” through the use of a causal loop diagram (CLD) to highlight how the different variables systematically interact with each other to deliver the sustainable management of conservation areas.

Section 6.5 answer the question “What are the strategic business models and frameworks are conservation area managers currently utilising in their planning?” to understand if conservation area managers currently utilise any models and frameworks for the strategic management of their conservation tourism businesses.

Section 6.6 answers the question “What constitutes a strategic management framework for conservation areas to optimise their long term financial and environmental sustainability?” by providing a planning framework that incorporates the variables highlighted by the research, the planning practices of conservation area managers as well as contemporary planning frameworks.

Nature provides a broad flow of this systems approach the synthesis in this chapter will follow. First, all the players or variables are identified in the system; secondly, we try and understand how they relate to each other; and thirdly, we need to understand and quantify the impact of the relationships inside and outside of the system (Nature, 2020). The next section aims to identify the critical variables involved in the strategic management of conservation areas.

6.2 Variables that have a disproportional impact on conservation area success

To answer two of the primary research question "what environmental, societal, industry and business variables has a substantial impact on conservation area success?” it is essential to gain an understanding of the variables that influence the strategic planning and strategic management of conservation areas. Figure 6.2 offers a depiction of a high-level overview of the variables involved in strategic management.

Based on the work done during the current study the BIESE framework depicted in Figure 6.1 was developed. The BIESE (Business, Industry, Economy, Society, Environment) framework is an expansion on the very well know Environment, Society, Economy depiction adapted from Lozano (2008) in Figure 2.6, and also adapted by Rockström and Sukhdev to depict the UN Sustainable Goals (Stockholm Resilience Centre, 2016) in Figure 2.1. Lozano aimed to reduce the anthropocentric nature of the model by utilising dotted lines and arrows showing the interaction between the environment, society and the economy. Similarly, the BIESE framework includes dotted lines and arrows to indicate the non-linearity and the interdependence of all the variables.

Figure 6.1 also depicts a directionality through the concentric circles. The environment and biosphere where we all live is the ultimate resource. The directionality guides through various concepts to the ultimate goal or objective, the 'reason for existence'. So if the world is non-linear why depict the model as a linear flow – the main reason is the clear indication from Goal theory that has shown through years of study in over a 100 different tasks and more than 40,000 participants in eight countries that setting goals to improve performance. It has been proven in the group and individual settings (Locke and Latham, 2002). Ultimately businesses, conservation areas and us humans need to strive to attain something or as Donella Meadows (1987) put it "Visions alone don't produce results, but we'll never produce results that we can't envision."

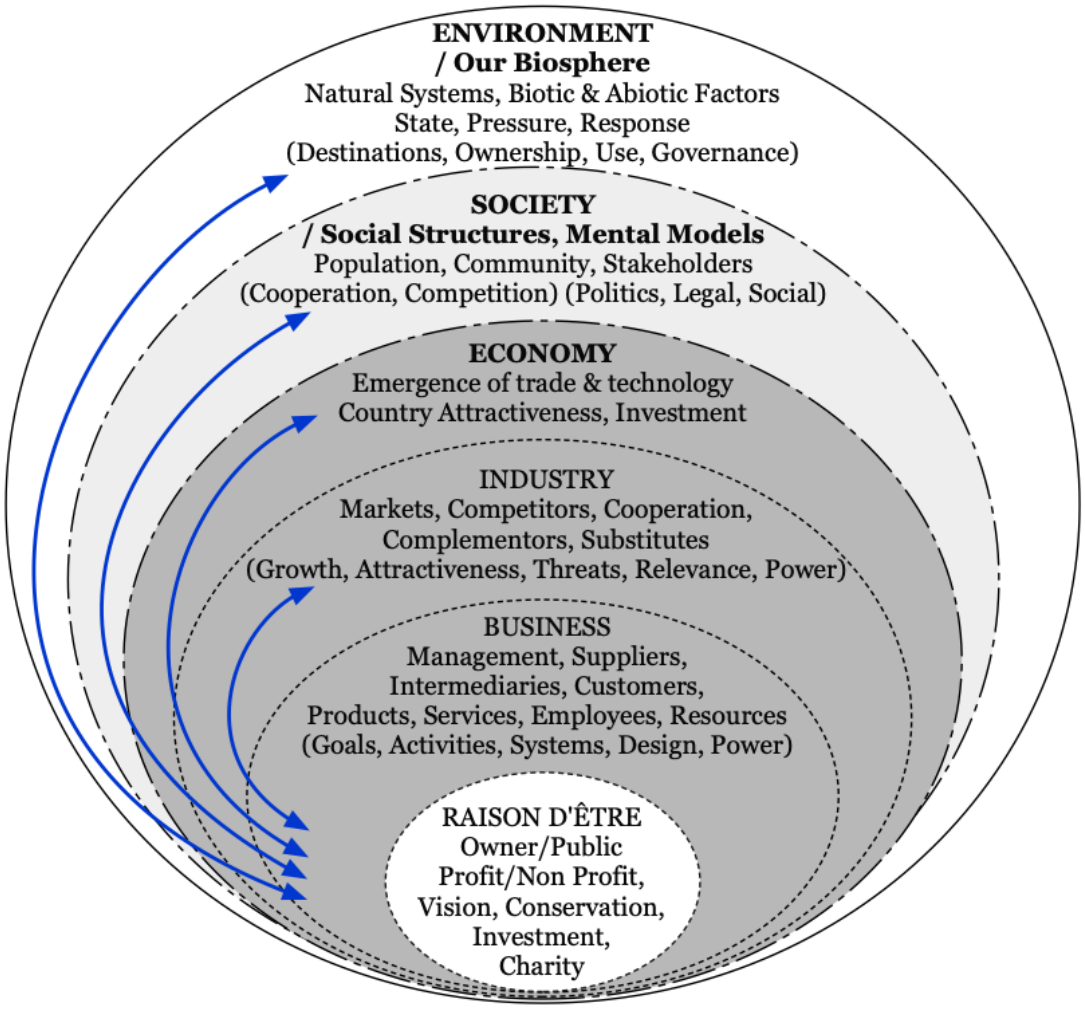

Figure 6.1: BIESE framework

Source: Researcher's compilation

As can be seen in Figure 6.1 the three outer circles depict the macro-environment followed by the industry environment and the business environment. The following is a short introduction to the variables following section will go into detailed descriptions. The environment or natural system our biosphere incorporate the main biotic and abiotic variables. Natural systems, including biotic variables like other beings and abiotic variables like the weather, have a significant influence on the conservation tourism business. The variables that are depicted in brackets are mental models rather than physical entities categorised under the environment including ownership (our ability to own a piece of the natural environment), use (our ability to alter the landscape and use resources), destinations (ability to create destinations for tourism) and governance (our need to look after the environment).

Society as a macro-environmental variable involves not only our human population and communities but also our social structures and mental models. Our human biases and heuristics have a significant influence on how we see the world (Kahneman *et al.*, 1974), how we conserve and how we generate a living through our economic trade. The stakeholder theory provides an encompassing view of hoe our conservation tourism business interact with key parties within this social environment (Freeman, 2010). Our social systems and mental models also determine if we approach our business environment with a cooperative or competitive approach. Ultimately our social structures through our political systems determine our government and legal structures.

One such social structure that emerges over time rather than by design is trade (Chia and Holt, 2009). The measure of which is the economy. South Africa, as an international destination, is affected by the currency exchange rate. The economy also determines the investment available to fund tourism and conservation expansion. The emergence of technology has a significant influence on the conservation tourism market. The growth of the internet has empowered tourists to plan their travel, connecting them with online booking services. The growth of social services has also changed the way conservation tourism providers has to deliver their service.

With the advent of trade and commerce, some interactions between people and between businesses are closer aligned than others. The emergence of the market environment such as conservation tourism provides an imaginary fence or mental model in the form of industry. Industries directly affect the conservation tourism businesses through competitors, complementors and substitutes. The individual power of these players and threats of new entrants may affect the business. Ultimately the attractiveness of the industry and relevance to the conservation tourism business is critical.

Ultimately the objective of strategic management of a conservation area has the health and sustainability of the conservation tourism business in mind. The vision or “raison d’être” of the

business provides the strategic direction the manager has to attain, being profit, non-profit or purely for conservation purposes. Variables that can influence the business success include the quality of the management, suppliers, customers and their reliance on intermediaries' employees, products, services and resources. How management set goals, perform activities, design systems and the respective powers of these variables will influence the business sustainability.

Ultimately all these variables are interconnected. The successful management on the conservation tourism business will have an impact on the environment, society and the economy. Each of the variables and what the research results show will be discussed in the next sections, starting with the environment.

6.2.1 Environment

In the planning for conservation areas, the environment in many cases forms both the "raison d'être" (the reason for being) as well as an external macro-environmental variable. International targets have been set under Aichi 11 to achieve at least 17% of all global land under conservation. In 2018 the global achievement was reported to be 14.9% (UNEP-WCMC and IUCN, 2018). To achieve the target of at least 17% of land under conservation, an expansive approach is required to increase the land for conservation. With limited public funding and political will of voters, one of the best ways to increase lander under conservation is to improve the financial performance and long term sustainability of conservation tourism business.

Some of the companies interviewed in the study had a clear profit motive but due to lack of financial stability almost had to close their business *"Not up until two years ago, we had to pull it out, we are the brink of having to sell everything off and if it had to it had to come through public auction, that's where we were" (8PS, 2015).* Providing a strategic planning mechanism with an expansive approach for such operators is critical. Financial performance is critical to conservation areas, and increased financial performance not only allows for their sustainability but can also provide an opportunity for expansion to conserve natural systems, including its biotic and abiotic components.

The impact of tourism on the environment is critical but has been studied very comprehensively. By strategically planning for tourism growth and environmental impact control, the long term viability of conservation areas become more secure. The interviewees indicated the impact by tourists on the areas under conservation is very well controlled *"we have engaged in some research to further explore, and we are finding out our impact is not as bad as we thought"* (1PL, 2015) *"…a lot of the areas we go to are low impact areas, there are not many tourists around*"

(12SO, 2015). Places like the Kruger National Park was mentioned as high impact areas that require special consideration.

Although limiting tourism impact on the natural environment is critical, it has been well researched and is actively managed. Issues like ownership of the land under conservation, including the sourcing and purchasing land for conservation, is critical for the expansion of land for conservation. The ability to own wildlife has shown to be a key driver for private conservation expansion. Issues of use include strategic decisions on the changes to the land under management are acceptable and to what extent can we change sections of the conservation area for tourism. The environment is ultimately the destination, funded by tourism. Decisions about access and preserving the destination as a tourist attraction is critical.

The strategic management of conservation for expansion is critical. The next section indicates the current state of the environment in South Africa to understand the conservation managers macro planning environment.

6.2.1.1 State

Compared to the global average, South Africa does not have enough land under conservation. The country is reported to have between 6.5% and 7.8% of the country as protected areas (Department of Environmental Affairs, 2014; CBD, 2018). Private conservation and game farming make up a substantial area of land 16.8% (Oberem and Oberem, 2016: 12) and deliver only part of South Africa's conservation objective. The contribution of these areas to the land under conservation in South Africa is, however, not contributing to the protected land number as published by the DEA. Society ultimately, through their government representation vote for the expansion of land for conservation. How do they perceive the quantity of land under conservation?

The environmental perceptions study found that, although respondents perceive the overall state of the natural environment as unfavourable. Perceptions studies indicate that majority of respondents feel that the land under conservation in National Parks are adequate (77.8% Adequate and above rating). The amount of native bush and forest was also seen as at least adequate by 68.8% of respondents (Section 4.2 and 4.3). Respondents do not seem to be aware of the lack of land under conservation highlighted by the shortfall against the Aichi targets. Respondents do attribute some concern to the lack of parks and reserves in city areas (56%). If respondents (the public) feel the land under conservation is enough, it will affect what citizens demand from their government and ultimately public budget allocation for public protected areas.

Although it is difficult to indicate if respondents can accurately indicate the state of the conservation areas from this study, respondents may connect the positive experiences and recall

mental images of the size of significant reserves such as the Kruger National Park with the overall land under conservation. The gap between the actual quantity of land under conservation and the perceived land may be explained by how heuristics (availability heuristics) and biases affect the respondent's ability to assess the size of land under conservation accurately or committed to protected areas (Kahneman *et al.*, 1974; Kahneman, 2011). It may also be explained by the abundance of private conservation and game farms, highlighting their importance to increase the land under conservation.

As for the actual state of the natural environment, respondents in the environmental perceptions survey indicated that 53.7% of respondents found the overall state of the South African environment bad or very bad. Respondents were more forgiving when it came to the overall state of Native bush and forests, where 60.3% of respondents indicated an adequate and higher rating. The natural environment in towns and cities, as well as water resources, scored at least favourable. The majority of the interviewees in the conservation manager and stakeholder interviews saw their role is securing biodiversity *"Biodiversity, mainly and then trying to sustain the species that are here and not lose any species, that is the main objective"* (7GS, 2015). Respondents in the study of environmental perceptions are at least partially satisfied with their work.

The results provide an overview of the general state of the environment and also the perceptions of the general public on the size of land under protection. To strategically manage a conservation tourism business, it is vital to understand the environmental pressures affecting them.

6.2.1.2 Pressure

The study highlights some critical pressures on the environment from the perceptions of the general public as well as crucial conservation stakeholders. According to the Living Planet Index, the global population loss of vertebrates between 1970 and 2018 is a staggering 60 % (WWF, 2018). If we look at plants as indicator species habitat loss is the single biggest threat to species loss. The Department of Environmental Affairs (2014) indicates that the cultivation of crops is first under their list of the most pervasive threats to habitat loss in South Africa. The respondents in the environmental perceptions survey did not indicate farming as the leading contributor to environmental damage. In the question relating to the damage to the native land, freshwater and plants, only 2.9% of respondents indicated this is a concern. In the question relating to damage to native forests and bush, only 6.2% Indicated farming was a major contributing variable to environmental degradation.

The main variables that respondents highlighted that cause damage to native forests and bush included urban development (17.7%), industrial activities (15.8%), dumping of solid waste (10.9%) and mining. Variables that damage native land and freshwater plants were identified as industrial activities (17.2%), sewage and stormwater (15.8%), dumping and solid waste (12.8%) followed by urban development and mining at 10.6%. Respondents did not link farming to the damage caused to native forests and bush. Due to the availability heuristic, their mental frameworks may underplay the importance of farming (Kahneman *et al.*, 1974; Kahneman, 2011). The majority of the respondents (84%) resided in cities and towns. The lack of media coverage and recall the issue may also have influenced the low importance respondents to provide farming impact.

Key themes were highlighted by respondents in the study of environmental perceptions open question "What do you think is the most important environmental issue facing South Africa today?" Many of the respondents (497) research included pollution in general as a major cause of environmental pressure; many of these responses also related to water pollution. The lack of fresh or potable water and the decline of available water resources and its negative impact on agriculture and society was the single most specific issue mentioned (918). Overpopulation, population sprawl, urbanisation and the rise and informal settlements, poor environmental attitudes and poor governance along with other human variables were mentioned as key concerns.

The general public highlighted water issues in South Africa as the most pressing environmental issue the country has to deal with, this quote provides an example *“WATER: shortage and pollution - cannot sustain the population for much longer in die future, for fresh drinking water and clean, unpolluted water irrigation”* (56205, 2016). A large part of South Africa was going through a drought situation. Monitoring of water resources in conservation areas and identifying upstream polluters is critical for a holistic approach to managing the overall environment. Although respondents highlighted pollution of the water systems, the South African public does not seem to connect farm effluent with the pollution.

Two out of nine planetary boundaries have been overshot. One of them is the biogeochemical boundary, specifically Nitrogen. Nitrogen is runoff from farm fertilisation (Steffen *et al.*, 2015). Although, respondents felt they are very knowledgeable about the environment (94.3% Adequate and above) 13% of respondents indicated they “don’t know” what pressure farm effluent and runoff has on the environment. Respondents did not seem to connect the farm runoff with water supply. Farm runoff was ranked ninth, and only 2.1% of respondents indicated that it caused damage to the freshwater supply. Nitrogen run-off is not very prevalent in the media even though it is a critical issue, and it was not very easily recalled.

The stakeholder interviews provided more direct pressures that the conservation area managers a facing in their management of conservation areas. The most prevalent issue faced by conservation area managers was funding for key conservation projects and activities. Population encroachment, agricultural land demand, housing land demand, land invasion and development was mentioned as a key environmental pressure. Poaching concerns and illegal harvesting, endangered species and lion hunting were mentioned. The fragmentation of the conservation industry between national, regional, municipal and private conservation was mentioned as a critical concern. Tourism impact was also crucial to interviewees, indicating that safari operators need to have a healthy respect for the environment. Natural issues such as wildfires, invasive plants and genetic diversity were also mentioned.

Other environmental impact variables such as those shown to impact climate change had some specific mentions by respondents and interviewees but were mainly coupled with other issues showing the interconnectedness. As the cause of air pollution, 25.7% of respondents felt the industrial activity was the cause and 19.4% motor vehicle and transport emissions. The global warming or climate crisis discussion is more aligned with respondents and interviewees response to it, to be covered in the next section.

6.2.1.3 Response

Citizens and conservation area managers provided their response to environmental pressures. Respondents actions in the environmental perceptions study were skewed toward general activities respondents could achieve in their daily life, in their home. The four highest-ranked activities respondents selected included “reduced and limited use of electricity” (91.3%), “reduce and limit the use of freshwater” (87.1%), “bought products marked environmentally friendly” and “recycled household waste.” The majority of respondents did, however, visit a conservation area in the last 12 months. 66.8% of respondents indicated they had visited a national park or public conservation area and 57.5% visited private reserves. This support for conservation initiatives mainly seems relatively passive though as responses to “participated in an environmental organisation”, “been involved in a project to improve the natural environment” and “been an active member of a club or group that restores and replants natural environment” all had participation rates less than 26%.

Conservation area managers interviewed, although managing areas under conservation daily, had minimal activities aimed at general environmental impact reduction. One reserve interviewed won an award for the greenest building design at the inception of the cottages they rent out. Managing conservation areas sustainably on the whole though, provide difficulty as many are based in remote locations and some, for example, have to utilize generators and source their

water. One respondent did indicate they monitor all consumption, but as the balance of the interviewees indicated they are still in the process of working on having less of a footprint. The activities of the conservation areas were generally more focussed on conservation than general sustainability, something that could be improved as part of a strategic plan.

The conservation activities that conservation area managers included property management (fencing, erosion, hides, buildings, lapa, entrance, footpaths, roads), wildlife management (selling, swopping, bloodlines, game counts, rhino relocations), predator management, alien plant management, visitor interactions (game drives, cheetah interaction, junior rangers), fire management, wildlife centre management and research. These activities constitute the leading activities conservation management have to perform. Interviewees indicated that dependent on the size of the conservation area, some parts of the conservation areas are left alone, so nature can take its course. A respondent mentioned the expansion of land under management as an objective, it, however, does not seem to be a general focus area for conservation area managers.

The environmental perceptions research indicate if South Africans perceive conservation areas to be adequately managed. Respondents provided a very positive response for the management of national parks with 69.7% indicating they are adequately, well or very well managed. Unfortunately, national parks proved to be much higher than the perception of other natural areas native bush and forests scored the second-highest adequacy rating at 43.7%, less than half of the people thought our bush and forests were well managed. Most respondents specifically found natural areas in cities and towns to be poorly managed (67,7%). The municipal conservation areas part of this study was actively managed, and in good condition, it may be that respondents perceptions included general cities, landscapes, cleanliness and parks.

By looking at the response to the environmental challenges of both conservation area managers as well as the general public, we can get an understanding of the conservation role of the conservation tourism industry and other environmental pressures. Society as a whole is critical in addressing these issues, but our perceptions and mental models shape the way we address them. The next section focus on these societal variables.

6.2.2 Society

Everything we experience and perceive in the world around us is filtered through our mental models. Our perceptions are how we make sense of the world around us (Sterneberg and Sternberg, 2015). The BIESE framework in Figure 6.1 includes our mental models within the context of society. A clear example of the misalignment of our perceptions and the reality is uncovered in the environmental perceptions study respondents indicating that the land under

conservation for national parks (77.8%) and native bush and forests (68.8%) is at least adequate. At the same time, South Africa is falling well short of the Aichi 11 target for the land under protection.

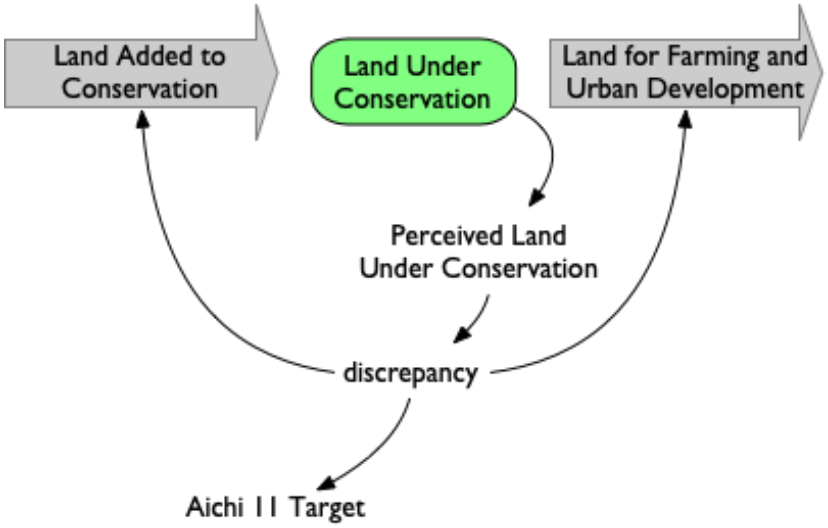

Figure 6.2: Land under conservation

Source: Researcher's adaptation from Meadows (1999)

Not only are Targets such as Aichi 11 but also mental models or paradigms key leverage points in changing a system (Meadows, 1999). Figure 6.2 indicates how our mental models and perceptions affect the land under conservation by impacting the input and output. If we want to increase the land for conservation, one of the key levers to change is the perceptions regarding the land under conservation. If the perceptions of the general public are that South Africa has enough land under conservation, no motivation will exist to insist their representative politicians vote for an increase of conservation budgets or legislation to promote such an increase. Such perceptions also affect our actions in determining the land requirement for farming and urban development.

Although the world population growth was slowing down and predicted to peak between 10 and 12 billion people, the African population is predicted to roughly double by 2050 (Wolfgang and Samir, 2010; Rosling, Rosling and Rosling Rönnlund, 2018). This increase in population is already putting pressure on habitat and, specifically conservation areas. In South Africa habitat loss is mainly caused by the procurement of agricultural land (Department of Environmental Affairs, 2014). Agriculture business not only provides food for South Africans but also to internationally through exports. The environmental perceptions study indicates that South Africans underestimate the pressure of farming on the land under conservation. The environment, society

and the economy are inseparably interlinked, and our mental models and perceptions shape how we perceive them.

Respondents in the environmental perceptions study place urban development and industrial activities as the leading causes of damage to the native forests and bush. These population pressures are a key reason for developing a strategic solution for the expansion of conservation areas. Increased population numbers require economic growth to supply employment, increased food supply as well as urban development, all putting pressure on land available for conservation. Conservation tourism provides rural employment in areas where it is needed the most. Communities do, however, require more than just jobs, various stakeholders such as local farmers and business people also feel they have a claim to the land. Community expansion also requires land for housing initiatives (Burgoyne and Mearns, 2017).

The stakeholder interviews in the conservation tourism areas confirmed this need to work together with communities. Some of the interviewees indicating it is the single most crucial part of their role. *"I can tell you, number one, in my opinion, is community…we have a very strong relationship with our communities. We have been working with them for years. Through the foundation, we have been building clinics and doing great things for them and go and look at our neighbours our borders the guys on the other side of the fence literally on the other side of the fence that don't have a community forum they have lost tonnes of rhino"* (1PL, 2015). Community involvement of the interviewees included not only employment creation, but also local sourcing, building schools and environmental training. *"People first, if they are happy we are happy. If they are not (happy) we are not. Because we have to, it is their future and ours so our relationship in terms of that has to be shared"* (8PS, 2015). Cooperation with communities, although extremely important does fall short of understanding social structures we have to look to mental models.

Stakeholder Interviewees, as well as the results of the environmental perceptions study, indicated that significant events and travellers perceptions about the events had a disproportionate effect on the tourism business. Major events that affect society such as the 9/11, Ebola crisis and the unabridged birth certificate (One respondent mentioning a 40% drop in business) requirement was highlighted by respondents to have affected their business substantially. Even where destination countries were on the same continent but geographically removed tourist and intermediary perceptions played a significant role in tourism numbers. The drought affecting certain South African areas also proved to be one such major event. The respondents' perceptions of such a significant event, provide some insight into how humans, due to the recall and recency deemed the water supply in South Africa as the single most important environmental variable. Another recent well-reported case, the Ebola crisis affected tourism businesses thousands of kilometres away. (Kahneman *et al.*, 1974; Kahneman, 2011).

Policy frameworks are how society deals with human interaction and such major events. Policy frameworks can have positive and negative influences on conservation tourism. Interviewees mentioned the birth certificate requirement as an example of such a policy with significant adverse effect. A positive spin-off from other countries, negative policy decisions are also apparent, with tourists changing their African trip to new countries. These policy decisions can also be affected by poor governance, which was mentioned as a key concern in the environmental perception study. A notable number (224) of respondents highlighted government and municipality decision making, policies, governance and corruption (44) to be a significant issue facing environmental decisions.

Political variables have a disproportionate effect on conservation tourism business. The government provides resources for the running of conservation areas, budgets which have to allocated and approved by the government of the day. *"So that's R7.5 million or odd that's provincial funding, … So, and there is little bit of salaries, which will pay for the Tourism Officer and the housekeepers and maintenance of the facilities. So the upkeep of the trails, the roads… is funded by the Province so the catchment management, cutting down the aliens, putting out the fires and doing the infrastructure maintenance"* (14GS, 2015). The policies developed through the political process that interviewees mentioned that affect private conservation areas included the unabridged birth certificates that deter tourism, the tourism marketing investment that grows tourism and B-BBEE as well.

Not only can the societal variables affect the conservation tourism business, but also other social variables such as crime. Perceptions of high crime rates in South Africa may affect the country's attractiveness to international tourists. The economy discussed in the next section will also affect country attractiveness.

6.2.3 Economy

The economy ultimately is an emergent social construct which includes investment, trade and industries (Chia and Holt, 2009). The economy, as a macro-environmental variable influences the conservation tourism industry. Interviewees indicated the impact of the Rand strength compared to other currencies specifically affects the attractiveness of the country. South Africa is seen as a value destination, and respondents mention the strength of the Rand vs other currencies as a critical driver for conservation tourism. *"You have the overseas market which is quite big for us and that market, they see it as a bargain because the exchange rates (the Euro the Dollar). We are quite cheap destinations"* (6PL, 2015). Similarly, respondents did indicate that the international economic situation does affect South African tourism.

The social and economic situation also affects the investment in conservation tourism businesses. With political uncertainty and low economic performance banks, for example, may not grant loans to purchase a property. *"banks not giving out loans for farm property, you have to come up with 50% deposit for them to loan you the money. It is very difficult to buy or sell at the moment. People can't sell their game farms because there is no financing and we are not talking about half a million we are talking about 3.4 million [Rand] for the property that you want to buy. There are far better investments"* (8PS, 2015). Interviewees that are reliant on local tourism are also more susceptible to local economic downturns.

The emergence of certain technologies has proved to have a major impact on the conservation tourism business. The growth of the internet, social and mobile technologies affected most of the conservation tourism businesses. The main advantage of the growth of the internet has been to bring the tourist closer the conservation area through direct marketing as well as direct booking services *"Electronic media helps us a lot with getting the market we are looking for"* (6PL, 2015). Marketing has moved mainly to online mediums. Conservation tourist areas specifically work for and request good ratings on apps like Tripadvisor. One conservation area manager specifically creates sharable moments for social media and has Wi-Fi on the game drive vehicles to address tourists need for instant gratification. Social media can also adversely provide a platform for complaints.

The economy has a broad overall impact on the tourism conservation business. It is, however, a broad social concept. It incorporates the more specific industry variables in which the conservation tourism business operates.

6.2.4 Industry

According to McGahan and Porter (1997), industry choice can account for up to 36% of the variance in profitability. The critical importance of industry choice for the strategic management of conservation areas is thus fundamental. Although public conservation areas are mainly funded by the public and conservation tourism, game ranches have four main industries they can rely on for funding including breeding game (or rare and endangered game); hunting/consumptive tourism (trophy and biltong); ecotourism/wildlife tourism and processed game products (York, 2016). A further funding source identified during the study, which can be classified as a separate industry is training. Real estate provides a further opportunity for conservation areas to generate funds; this, however, may be limited to onetime income rather than a consistent income.

Although one of the conservation areas interviewed derived income from real estate, training, game breading, as well as tourism, the majority of the conservation areas in this study, indicated

their primary source of income is conservation tourism or public funding. The majority of the industry analysis is thus on the conservation tourism industry. The interviewees identified specific drivers that affect the industry profitability or sustainability, including markets (international and local), intermediaries, competitors, complementors and substitutes. How these variables affect growth, attractiveness and threaten the conservation area is critical to its success. The relevance of a particular industry to a specific conservation area is also critical; for example, hunting in a fynbos biome would not provide a strategic fit.

Most interviewees indicated the conservation tourism market was growing and substantiated it with their tourist numbers. In contrast, others provided examples of the Western Cape tourism numbers published by the city showing growth. In general, interviewees felt that tourism was growing, one referred to the market as not saturated but stable. One common theme that was mentioned by respondents was the effect major events were having on tourism growth and pressure. Abridged birth certificates and the Ebola crisis caused a significant business downturn for the industry. Once again showing that country attractiveness is a big driver in this industry and major adverse events that tourist perceive as dangerous or inconvenient has a substantial influence on industry performance.

Dealing with business competition is one of the original driving forces behind the development of strategy as it relates to business after the second world war (Bracker, 1980). Although interviewees were cognisant of competition *"SA and also competition-wise, you know there is an oversupply of beds so you have to really be on the ball if you want your share of the pie"* (1PL, 2015). The majority of respondents pointed to the differentiated nature of the conservation tourism market. Each conservation area has its natural uniqueness, and each conservation tourist business has its unique offering. Some respondents went as far as to indicate that competition is good and improves the quality of the offering provided to the tourist. The respondents highlighted the importance of cooperation.

It is clear that respondents do not just see other conservation areas like competition, but also as cooperative partners to further the conservation cause. *"I pride myself with the relationship we have with the other conservation organisations in this area, as well as the cooperation and those partnerships we have with the larger estates"* (11GS, 2015). Interviewees sighted the dropping of fences around the Kruger National Park as an example of private conservation areas that theoretically compete with Kruger, but which provide increase area for game to roam. Further examples include public, private partnerships in the reserves and on private land. One interviewee believed more cooperation is required between national, provincial and municipal conservation areas, similar to the Park Rangers in the United States of America, to share resources and improve coordination.

Further to competition Michael Porter (1979) highlight substitution as one of the five forces that shape strategy. Adam Brandenburger and Barry Nalebuff (1996) in their Value Net highlight the vital concept of a complementor. Similarly, interviewees highlighted the importance of complementors in the conservation tourism market, although tourists have the choice of visiting urban tourist attractions rather than conservation tourist areas. The diversity of offerings to the tourist is an essential variable, and conservation and city tourism does seem to complement each other, together with providing an offer bigger than the sum of its parts. *"People are not going to come to SA all the way from New York and go and stay at [place] and go home… so they would rather do Cape Town spend a couple days in Cape Town and Joburg then do a bush experience, go to the Victoria Falls. So, do circuit so, if you can make your circuit sexy it is actually better for you"* (1PL, 2015).

Industry variables are critical to business success, and the choice of the industry as well as managing the threats related to the corporations' current industry is a fundamental part of strategic management. To understand how business management affects the conservation tourism business, we have a look at the effect of business variables.

6.2.5 Business

The importance of proper management of conservation areas supported by various organisations, including the CBD and IUCN. So how did the South African conservation area managers perform according to the public? Most respondents in the study of the environmental perceptions (69.7%) felt national parks were at least adequately managed. Although this is a good rating for the quality of management in the national parks, it is substantially lower than the New Zealand at 86.4% (Hughey, Kerr and Cullen, 2016). The South African national parks average rating at 2.99 was substantially higher than the overall management of native bush and forests at 2.48 (54%). It is also noted that respondents gave the current state of bush and forest a higher rating (60%) than the management of it. Respondents, however, rated the management of natural areas in towns and cities as poor (67.7%).

There is a stark contrast in how respondents viewed the management of national parks vs the management of urban natural areas. Respondents perceptions may play a very big role in the results. Urban natural areas may be judged with limited knowledge of municipal conservation areas and their status (availability heuristic). A further study may be required to understand why respondents perceived such a significant difference. The stakeholder interviews, however, did provide some indication of the frustration of municipal conservation area managers are forced to deal with including the lack of resource sharing with national parks that derive more substantial

income levels, financially strapped, inefficient and corrupt municipalities and urban sprawl. Reasons also highlighted by citizens in their open question responses.

Although businesses can control the way they react to competition, they do not always have control of the competitive situation. Business do, in most cases, have cooperative agreements with customers and suppliers. On the scale of control, the relationship with the customer and supplier in most cases is thus closer to an internal relationship than an external relationship such as a competitor. The model thus includes suppliers and customers as part of the business variables rather than industry. As with most segments, it has to be noted that all the segments overlap and interact and cannot be view in isolation. Business variables include the activities and resources that the conservation tourism manager needs to manage on a day to day basis to provide a service to the tourist as well as conserve the environment.

Suppliers and their procurement and management form a critical part of the organisation's value chain. Their importance and power in the conservation tourist industry proved to vary. Interviewees indicated that due to the rural nature of conservation businesses, some areas are only serviced by a small number of suppliers, others had sufficient choice. Stakeholders made some mentions about large corporate delivery suppliers and their limited buying power, but most interviewees did not feel these suppliers had a specifically high supplier power. One respondent mentioned if the suppliers do not provide they just visit the local supermarket.

Intermediaries in the conservation tourism business provide a crucial role. Although most of the private conservation areas interviewed were trying to reduce their reliance on intermediaries such as tour operators, most of them still received a substantial amount of business from them. *"Inbound operators, it's massive, because ultimately they are ambassadors for us and selling the products here so they are crucial to what goes on here, without them we don't have really much between us and the outside world"* (5SO, 2015). Internet solutions have provided conservation tourism areas with ways to promote their establishments without intermediaries. Intermediaries still play a significant role in securing customers for conservation tourism. However, intermediaries may now take the form of an online service such as booking.com.

Customer power, as presented in the five forces model, is presented as an industry force that determines an industry attractiveness. Interviewees were prompted on how powerful they believe the customer is in the conservation tourism business. A broad range of answers from not powerful to very powerful was received. The interviewees very quickly steered the direction of the discussion to customer satisfaction. As the hospitality industry is focused on delighting the customer and providing a memorable experience customer satisfaction seems to be top of mind. Taking customer satisfaction into account in the service design and experience is critical. To

attract tourists, the conservation area manager not only needs to try to create a destination but also products and services to fund operations.

Developing products and services is not only critical in the funding of a conservation tourist area but also in determining the industries the conservation area is part of. Products and services that the interviewees took part in included the following categories accommodation, real estate, venue usage, educational centres and wildlife usage. The conservation areas also had a wide selection of tourism activities, adventure tourism and educational activities that provided income for the conservation tourist area. To deliver on the value-generating products and services, the businesses require competent employees.

Interviewees have highlighted that staff is the primary resource in the business they have to manage. One respondent indicated a ranking in terms of importance as follow *"Well, obviously it is people, money, equipment…"* (14GS, 2015). Managing and training people is critical to business success. Interviewees indicated that trained staff provides an advantage. At the minimum, well-trained staff is required to run a business successfully. *"Is the most expensive resource you can have, access to skilled labour is a huge problem. Training people is extremely expensive and time-consuming"* (8PS, 2015). Other than employees, other resources are also critical in the management of conservation areas.

When interviewees were asked if they manage more for resources or competition, the overwhelming answer was resources. Including employees, conservation area managers spend a large part of their day managing resources. Resources they manage include the actual land under conservation/ natural assets. The importance of the conservation area as a resource has shown to be critical in that the location can be critical at attracting tourists, the location provides access issues in some cases, the creation of destinations is a key success factor, and it provides a drawcard. *"If you are not in the right area you won't cut it. I mean, it's a known fact the Waterberg, for example, has a hard time financially. They go after an SA market simply because they are not attracting the international guests who are obviously paying a huge amount (more than the locals), so you want to be in areas like the Sabi Sands which is a very international support base, which gives you more of a chance but very difficult to enter (barriers in terms of finances), so that's where that element plays a massive role"* (1PL, 2015).

A critical resource that conservation area managers have to deal with is the finances of the conservation area. Almost all activities have a financial aspect, be it capital or cash flow. The type of accommodation has a major influence on the resource management of the conservation tourist area. For some of the interviewees, the management of accommodation is central and requires daily management. The upkeep of these resources is also central to the conservation area

managers duties. *"Yes, so if the place is well run and facilities kept clean and neat and tidy, and it looks as if there is 'onderhoud' then you get more than you paid for"* (7GS, 2015).

Ultimately resources on their ow are purely entities. It requires management to put systems and procedures in place according to a robust commercial design to create a business. This integrated business system requires activities to deliver tourism products and services as deliver on the conservation objective. The next section will have a look at how the critical variables identified in the study are addressed in the current strategic management literature.

6.2.6 Strategic foresight, direction setting and choice

Understanding where the conservation business will be in ten years is critical. Conservation tourism managers do not only need to understand how the change will affect their entity, but they also need to be part of driving that change. Having a vision for the business is critical; it not only aligns the business behind a common goal but also creates forward motion something to strive for. The conservation tourism business, however, has a complex set of stakeholders and a diverse range of objectives to deliver on. The stakeholders interviewed a diverse range of key objectives including financial *"it is quite a tough game, therefore some operators are profitable an some aren't."* (1PL, 2015), conservation *"Our primary objective is to maintain the natural ecological processes"* (11GS, 2015) and society *"People first,… if they are happy we are happy"* (8PS, 2015).

Within this spectrum, the conservation tourism area needs to develop a 'raison d'être' or reason for existence by taking into account if the conservation area is a public or private entity or public/private partnership. Similar to the vision of the corporation, the reason for existence need to guide the objectives the conservation area will set be it profit, conservation, investment or charity. Ultimately the reason for existence may include a mix of financial, environmental and social variables similar to the triple bottom line "should attempt to understand the specific context within which it is generated, and should indicate how the organisation has succeeded in working with stakeholders to generate robust profitability, deliver value to customers, manage and develop resources, respect people and benefit the community" (Painter-Morland, 2006:362).

The framework highlights the main variables identified in the study that has an impact on the strategic management of conservation areas. The next section will explore how these variables relate to specifically available frameworks currently available to managers.

6.3 Key strategic management frameworks application compared to the BIESE framework

The section aims to answer the research question “Does the contemporary strategic planning frameworks utilised in management and environmental sciences address the strategic planning needs of conservation area managers?” Strategy in itself is an extensive and substantial body of knowledge. Figure 6.1 provides a representation of the strategic environment of the firm, incorporating some major schools of thought. The figure does not attempt to provide expanded BIESE framework but rather aim to show the interactions with the current frameworks available in the strategic arsenal. Figure 6.3 depicts the many overlaps that exist in different theoretical frameworks, depicting how these frameworks approached strategic planning from different perspectives.

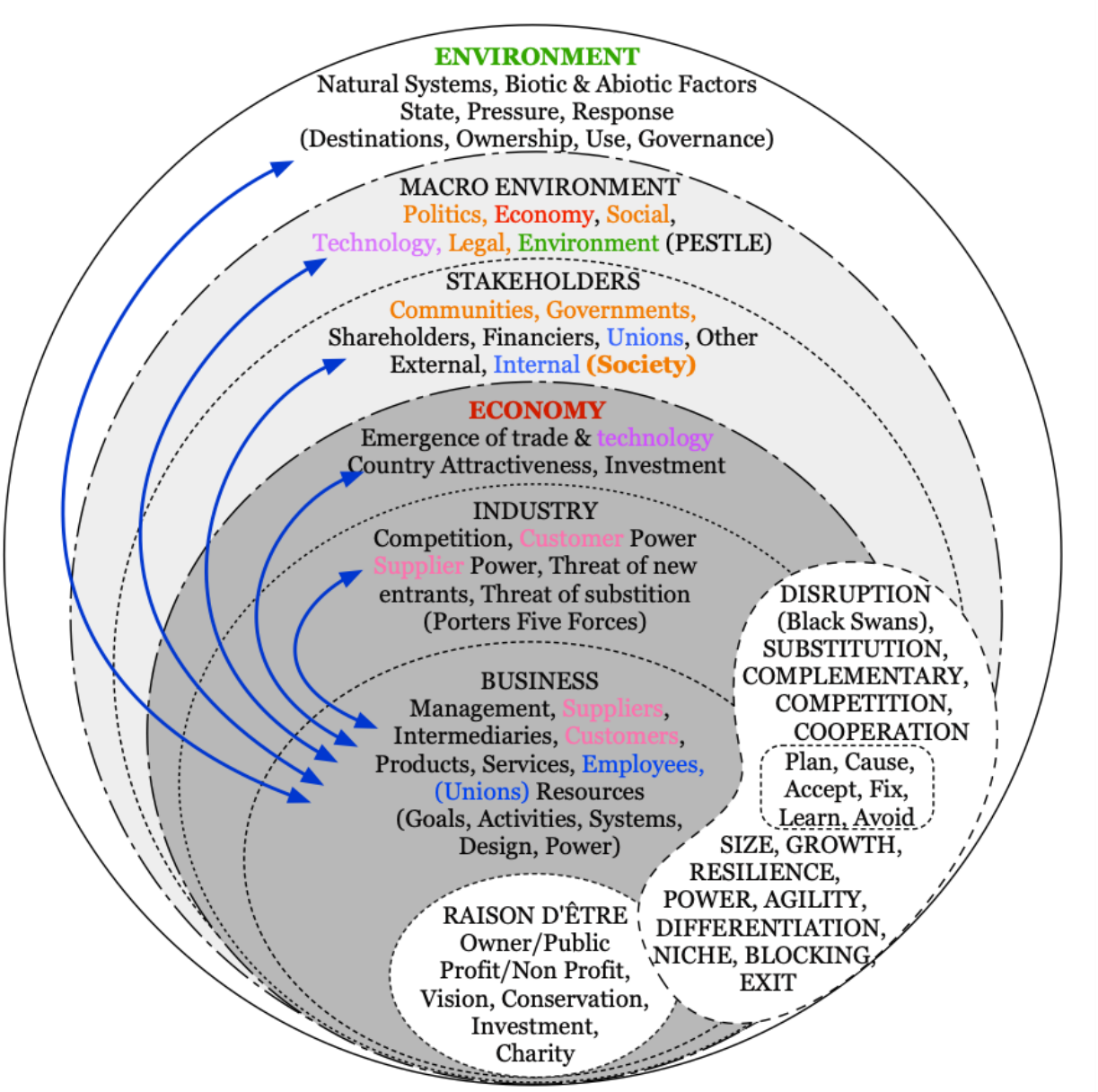

Figure 6.3: Key strategic management frameworks compared to BIESE framework

Source: Researcher's compilation

Theoretical overlaps, for example, in the 'stakeholders' concept made famous by Freeman (2010) includes customers, employees, suppliers, intermediaries and communities. Such an extensive overlap was mainly due to the human perspective of management, making it clear once again that none of the artificial boundaries we develop in our minds can be seen as isolated. All the variables interact with each other at various levels. Figure 6.3 has circles depicted with dotted lines to indicate its inclusiveness as well as the overlaps between frameworks, and overlaps are further indicated by arrows making clear that the different variables interact with each other. To aid the discussion of these overlaps, duplicate variables are colour coded in Figure 6.3. The 'kidney' in the right lower section of the depiction highlight strategic choice, which mainly fall

outside the scope of the study, but did surface in the results and will be discussed in short in Section 5.3.5.

6.3.1 Macroenvironment: PESTLE

It is essential to understand how the PESTLE framework relates to the BIESE framework as well as the research results. The usefulness of the mnemonic was tested in the analysis of the macro-environmental variables mentioned by the interviewees in the face-to-face interviews. Overall the PESTLE framework was advantageous in categorising the different external variables respondents highlighted in the discussions. The study results, however, showed that PESTLE has significant overlaps with other frameworks considered.

The environment, society and economy depiction by various authors in various formats (Lozano, 2008; Stockholm Resilience Centre, 2016) utilised for the development of the BIESE framework includes three of the five PESTLE Macro environmental variables. The environment depicted in green in Figure 6.3 shows the overlap of Pestle. Societal variables are depicted in orange. Political and legal variables already combined by Lazenby (2018) are very much societal variables as is social in PESTLE. These variables were classed as societal variables in the BIESE framework. Finally, the economic variable overlapped the environment, society, economy framework.

As a result of these framework overlaps, the PESTLE framework was not included in its original form in the final framework. The importance of industry in the results of a firm warranted the inclusion in the BIESE framework (McGahan and Porter, 1997).

6.3.2 Stakeholder theory

The description of ‘stakeholders’ emerged in management literature at Stanford Research Institute 1963, published in 1984 (Freeman, 2010). Stakeholder theory looks at strategy from a broad human perspective. Freeman proposes the premise that stakeholder theory as a strategy is a more ‘useful unit of analysis' for strategy than the tasks of ‘formulating, implementing and evaluating’ or the idea of ‘Industry’ (Freeman, 2004). Stakeholders originally included shareholders, customers, suppliers, employees, lenders, unions, society and broadly any group or individual who interacts with and influence on the business (Freeman, 2010).

As can be seen in the colour analysis of a selection of stakeholders groups, stakeholder theory does tend to align under society variables. It is important to note by listing stakeholders under society variables it does not restrict it to external stakeholders but rather indicates its overarching human interaction nature. Stakeholders are depicted in the industry as well as an internal stakeholder in the business segment. Interviewees tended to refer to stakeholders instead as

external interactions with non-standard business relationships, rather than the standard business connections customer, supplier and shareholders.

Stakeholders emerged as critical to the conservation tourism business success, some interviewees indicating that stakeholders such as communities are critical to their sustainability *"I can tell you, number one, in my opinion, is community…we have a very strong relationship with our communities"* (1PL, 2015). It emerged that due to their remote nature conservation tourism areas become a principal employer and support system in their surrounding rural communities. Interviewees further highlighted that employees are critical to conservation tourism business success. Other stakeholders mentioned included government, farmers associations, friends groups, the public and academic institutions.

The businesses interaction with stakeholders and the broader society has shown to be critical to conservation tourism business success. International research on industry variables highlights their importance to business success.

6.3.3 Industry: Porter's five forces

The framework depicts the fact that an industry falls within an economy which ultimately emerges as a societal construct and falls within our biosphere. So industry importance cannot be removed from the society or the environment in which it operates. When conducting an industry analysis the central component of such an analysis proposed by textbooks is Porter's five forces model (Ghemawat, 1991; Louw and Venter, 2013; Ungerer, Ungerer and Herholdt, 2016; Lazenby, 2018). The substantive part of the qualitative face-to-face interviews with stakeholders in the conservation tourism industry specifically focussed on the applicability of the five forces model, as well as to understand the shortcomings of the model in this industry. Conservation tourism stakeholders and managers were prompted during the interviews on each of the five forces and their importance in their respective businesses assessed.

6.3.3.1 Variables (forces) moved from the industry perspective

Customer power is one of the five forces that affect the industry, according to Porter (1979). Although customer power determines the attractiveness of the industry according to Porter (1979), the power of customers to the interviewees in the conservation tourism market was more aligned to what pressure customer satisfaction and customer sourcing have on the actual business. The word 'customer' according to the online etymology dictionary first surfaced in the late 14th century referring to a customs official or toll gatherer or "one who purchases goods or supplies, one who customarily buys from the same tradesman or guild." A more broad depiction of the word "a person with whom one has dealings" emerged in the 1540s (Harper, *n.d.*).

If one takes the definition of customer and the analogy in the manufacturing industry, retailers that buy from manufacturers are their customers, but retailers are not in the manufacturing industry they are in the retail industry. In the BIESE framework, customers were thus placed under the business variables. Although most of the interviewees indicated that customers are critical to their business in the Porters 'customer power' role, they have limited power. Intermediaries and government policy in the case of the conservation tourism business do seem to have a more significant impact on the results than an individual tourist. It was, however, noted that social media has increased customer power.

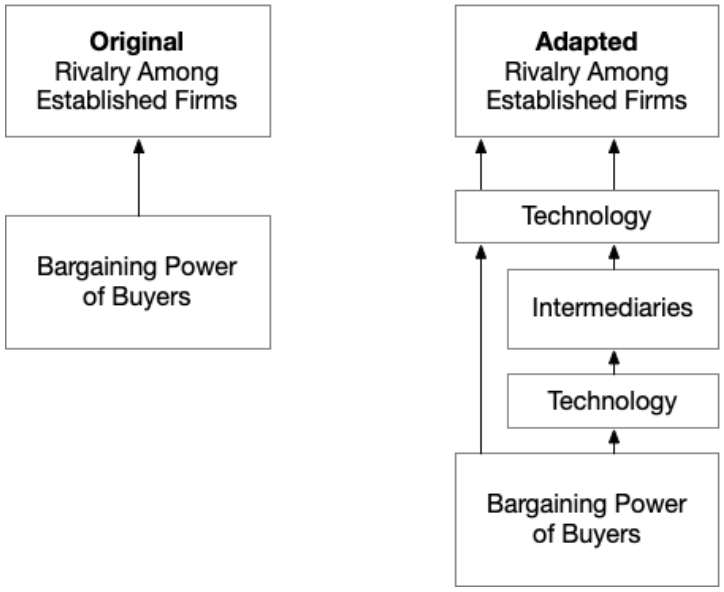

Figure 6.4: Bargaining power of buyers – Porter's five forces adaptation

Source: Researcher's compilation, adapted from Andriotis and Ανδριώτης (2004)

A viral social post can do great harm or good to the business. A good rating on an app like Tripadvisor or a proper placement in google search rankings and other booking sites can eliminate the need to utilise intermediaries. Intermediaries such as travel agents also rely on technology to grow their reach. Although a framework adjustment has been proposed to see technology as a separate force (Andriotis and Ανδριώτης, 2004) in the case of the conservation tourism industry the responses seem to indicate that it is more pertinent in the relationship between the customer and the conservation tourism industry as depicted in Figure 6.4. Technology has enabled conservation tourism areas to communicate with tourists directly. Sites like Tripadvisor and booking.com has become important technological intermediaries.

Porters indicate that supplier power is a crucial determinant in the attractiveness of the industry (Porter, 1979). Most of the interviewees in the study did not allocate an exceptionally high power to suppliers to the conservation areas. Although it was mentioned that bigger more significant

have bigger buying power than small conservation areas, respondents indicated some areas have a wide selection of suppliers to choose from. The rural nature of some of the conservation areas provides some everyday challenges. Some part of the catering supply has consolidated (Bidvest) but does not seem to pose a power disadvantage. Interviewees indicate they can source supply elsewhere if needed. Public conservation areas are even more distanced from the supplier due to public procurement. Suppliers, instead of being a significant industry influence, is a more tactical everyday management concern for conservation areas. For this reason, they were placed within the business variables category.

Risk of potential new entrants, as indicated by Porter (1979) provided to offer an ethical anomaly. Potential new entrants in the conservation tourism industry may be a business concern. However, the ultimate aim to increase land for conservation requires new entrants, unless these competitors are purely new lodges in existing conservation areas. *"No, I think in our case we want new areas."* (9GS, 2015). The study found that the interviewees were finding that the industry is on the increase with new lodges starting all the time. Creating established destinations that have brand recognition is essential for conservation areas such as the Kruger National Park is vital for conservation tourism areas. Although the threat of new entrants was not included in the framework as a separate variable, the framework included the broad term threats within the industry category.

6.3.3.2 Variables (forces) included in the industry perspective

Competitors or the force/action competition was a central part of this study, as it was central to Porter's five forces model (Porter, 1979). The BIESE framework included the actors in the framework and the actions such as threat within brackets. Although interviewees did not seem to focus on competition much during their daily operations, it was highlighted that competition does exist. An oversupply of beds post-2010 World Cup expansion was mentioned. Clear differentiation was, however, mentioned not only in the fauna and flora but also in the price positioning and service offerings. *"I have represented properties that are competitive with one another other, but the truth of the matter every one of them is absolutely unique. Especially when you are dealing with the owner-driven properties, each one has their own selling point"* 11GS.

Cooperation was added to the industry category as an essential alternative to competition (In a legal not anticompetitive way). More cooperation is required in the conservation tourism industry, due to the need to increase the land for conservation, the public-private partnerships, and the different sectors that are required to make this happen. Creating corridors to link conservation areas, dropping fences are just some of the urgent requirements to increase habitable conservation areas preserving biodiversity. *"Transfrontier Parks, Kruger's fence going down in*

Mozambique, we have got the Richtersveld National Park, we have got the Kalahari Transfrontier National Park, there are no fences no boundaries. Conservation is about the freedom for the animals move around the areas that they were originally habituated in" (12SO, 2015).

Cooperation between different public levels of public conservation areas is important to conservation success. *"…we have been operating for years and very much a silo effect. You have got your national conservation, provincial and local authority… I think it has become much better"* (9GS, 2015). Public-private partnerships have also shown to be critical *"I think for the majority of the guys we work with, they work hand in hand with the government. Talk about SANParks, and so on, the majority of them work hand in hand with those reserves…"* (13SO, 2015). Cooperation is an action rather than an entity such as competitors, rather than cooperative, which has a distinct meaning. Complementors, as proposed by Brandenburger and Nalebuff (1996) instead provide the other side of the substitute coin.

Conservation travel tourism has very strong substitutes. Although 80% of tourist trips to Africa is for wildlife watching (Space for Giants and Conservation Capital, 2019), an African safari is not on every person's bucket list. Tourists have a multitude of tourism options, for example, cities, beaches, monuments and cultural tours. Interviewees, however, indicated that tourists want multiple offerings. An African safari holiday is complemented by some time in a city such as Cape Town. *"People are not going to come to SA all the way from New York and go and stay at [place] and go home… so they would rather do Cape Town spend a couple days in Cape Town and Joburg then do a bush experience, go to the Victoria Falls"* (1PL, 2015). Some fundamental industry forces that are important to interviewees were included in the framework.

Interviewees highlighted that growth is vital to the industry, specifically the growth of international tourists to the country. Growth can be potentially transformative as tourists to Africa is projected to jump from 62 million to 134 million by 2030. Tourism already comprises 8.5% of the continent's economy and support 24 million jobs (Space for Giants and Conservation Capital, 2019). The attractiveness of the industry is crucial as it drives capital investment. Conservation tourism is well placed to receive funding through altruistic, business and lifestyle reasons. Industry threats as indicated are essential to monitoring. However, they include a more extensive range than proposed by Porter (1979). Major threats include a decline in country attractiveness due to social, health, crime and policy reasons. Conservation tourism managers need to identify relevant industries and markets for their specific conservation area and geography. Finally, power relationships with customers and intermediaries need to be considered.

Porter's five forces model, in its original form, did not prove to be a constructive framework for conservation managers and stakeholders to evaluate the industry. Conservation area manager

no only found the terminology and concepts foreign but the variables identified by Porter (1979) did not seem to represent the most essential industry variables highlighted by conservation area managers, for the South African conservation tourism market. To introduce industry and business variables to environmental science, the expansion of the well-known environment, society and economy model proved to be a helpful depiction.

6.3.4 Toward the environment, society and economy

The concept of environment, society and economy are widely published and presented in well-known reports (WWF, 2014). The framework has been adopted by the Rockström and Sukhdev (2016) to depict the sustainable development goals on the three levels depicting the interdependence. The concept has been extended further to triple bottom line reporting in business circles (Painter-Morland, 2006). Lozano aimed to introduce a three-dimensionality into the depiction to show the interactions between the environment, society and the economy. In an anthropocentric world, the environment is interdependent on the economic conditions, as well as the wellbeing of society.

The BIESE framework includes the biotic and abiotic variables as introduced to the depiction by Mebratu (1998) within the environment category. The macro-environmental variables that are depicted by PESTLE, as well as stakeholders, are represented in the society category as indicated by the light grey in the framework. The economy category is expanded to include economy, industry and business variables. The expansion provides the conservation tourism manager with a representation of the important variables to take into account during the strategic management planning process. Ultimately the success or failure of the conservation tourism business in the framework has a feedback effect or impact on society and the environment.

The framework covers the crucial variables in five categories namely business, industry, economy, society as well as the environment. The perspective of this research formed the strategic management role of the conservation area manager. Space for Giants and Conservation Capital (2019) provides a different perspective in their conservation investment toolkit.

6.3.5 Conservation investment toolkit

In 2019 while concluding this study, Space for Giants and Conservation Capital (2019), together with the UN Environment Programme, published a white paper called ‘building a wildlife economy’. Although the study was published after the conclusion of this research project, it, however, includes a list of variables governments and conservation area managers need to take into account for successful conservation tourism investment.

Table 6.1: Supportive factors for sustainable nature-based tourism

Natural assets	• Landscape quality • Visible wildlife • Wilderness character • Uniqueness value	Successful nature-based tourism is founded on appealing natural assets with the addition of competitive products accommodation, activities, etc - that will cater to visitors across different segments. There are regions like Central and West Africa that possess strong natural assets but have not yet developed tourism. This is a significant future opportunity.
Management	• Property rights • Pro-conservation policies • Management capacity • Resource needs	Clear property rights and land tenure enables nature-based tourism to operate within state protected areas. Clear management plans, pro-conservation policies and their inadequate implementation, and properly considering resource needs, are all necessary to develop sustainable nature-based tourism.
Political stability	• Security electoral • Cycles visitor safety • Benefit flow • Local governance	Tourism needs positive sentiment and strong country brands, which are vulnerable to the negative publicity generated by political instability. Negative perceptions can affect some countries and regions disproportionately, and can only be addressed by broad-based strategies to deliver stability and security, coupled with well-funded marketing campaigns to correct misconceptions.
Optimised concessions	• Legal structure • Commercial terms	To reduce the cost burden on government or landowner, conditional operating rights can be assigned to the private sector while retaining sovereign rights with the State or owner. These range from simple concessions to operate tourism facilities, to Public-Private Partnerships that delegate responsibility for management functions and costs to private partners.
Improved Access and Infrastructure	• Road and Rail • Air Access • Communications • Ease of Getting Visas	Tourism development needs good national road, rail, air and communication networks to enable the free movement of people and information including to and from protected areas. Nature-based tourism also requires all infrastructure to be sensitively designed to consider its impact when it is located in or around protected areas.
Strategic marketing	• National strategy • Government support • Partnerships	Individual marketing by commercial operators plays an important role, but a collaborative, nationwide approach involving public and private stakeholders broadens the economic impact and helps prioritise actions and developments to achieve a globally recognised and competitive nature-based tourism sector.
Business environment	• Licensing conditions	Tourism requires a favourable business environment with fair regulation, transparency,

	• Transparency • Incentives	and low corruption. African countries currently have an average rating of 51% on the World Bank “Ease of Doing Business” scale.
Private sector capacity	• Credible operators • Regional linkages • Competition	Creating and marketing nature-based tourism products is ultimately private sector driven, and requires the presence of operators with the resources and experience to deliver. New destinations should focus on lowering investment risk, while mature destinations should encourage private-sector competition to ensure a high level of quality and value.
Coordinated national planning	• Inter-ministerial Planning • Governmental Planning	To ensure the long-term viability of protected areas, national ministries need to coordinate development plans. Ministries often develop plans for example around infrastructure and agriculture, without consideration of protected areas and other valued natural resources. Integrated development plans will help maintain protected areas while supporting smart development.

Source: Space for Giants and Conservation Capital (2019: 21)

The framework is broken down in nine distinct variable categories including natural assets, management, political stability, optimised concessions, improved access to infrastructure, strategic marketing, business environment, private sector capacity and coordinated national planning. Of these nine categories, the BIESIE framework incorporates all, except optimised concessions, improved access and coordinated national planning. The supportive factors for sustainable nature-based tourism have approached the variables from a governmental perspective rather than a business strategy perspective, as shown by the coordinated national planning. Improved access may not have surfaced as a key variable due to the advanced South African infrastructure.

The three companies that own concessions, interviewed during this study was approached from a general business strategy perspective. The questions posed to the stakeholders did not uncover concession related variables. The legal and government variables are seen as external forces in the BIESE framework. It is suggested that future studies include a concession measure to understand this relationship and measure its impact on the strategic management of conservation areas. This legal framework will be critical in the success of the conservation area and is a critical strategic decision point.

The natural environmental variables in natural assets are covered in the environment category of the BIESE framework. The management category variables, as presented, are represented in different categories in the BIESE framework. Property rights are presented in the environment,

conservation policies under society, management capacity and resource needs within the business section. The involvement of the local government in strategic marketing is covered in the BIESE framework as country attractiveness as well as industry (markets). The business environment category variables licensing, transparency is covered within society. Private sector capacity is another category that views the firm from a public perspective, as indicated by the inclusion of credible operators, regional linkages. Competition is covered within the industry factors in the BIESE framework.

These frameworks together provide a depiction of critical variables the conservation area manager and public decision-makers should be aware of for sustainable conservation tourism success. The concentric circles in the BIESE framework point to a depiction of the goal or vision of the conservation tourism business.

6.3.6 Strategic foresight, direction setting and choice

Strategic foresight, direction setting and choice fall outside the main scope of the study it is, however, essential to show where these activates fall within the BIESE framework. According to Rohrbeck and Schwartz (2013:1593) “the term “foresight” has been used to describe activities which inform decision-makers by improving the inputs about the long-term future of an organisation.” Foresight is the ability to see signals and recognize trends and patterns to understand what the future may hold. The framework presents a list of external variables such as environmental pressures, society, politics, social structures and technology, that conservation tourism managers should take into consideration when looking to how changes in the future may affect their conservation business.

Utilising this strategic foresight, the conservation area manager can look at developing the strategic direction of the company. The strategic direction can include the vision, goals and objectives of the firm. The BIESE framework uses the term ‘Raison D’être’ or the reason for existence. Donella Meadows (1987) quote presented earlier “Visions alone don’t produce results, but we’ll never produce results that we can’t envision” suggest the importance of envisioning the future we want to create. She further indicates that goals one of the three most important levers to intervene to change a system (Meadows, 1999). Before conservation tourism managers approach the strategic planning process, the reason for the existence and purpose of the business should be apparent. Without a clear vision, strategic decision making is impossible.

Strategic decision making presented in the kidney-shaped depiction in Figure 6.3 provides an example of possible strategic decisions a conservation area manager may have to make to ensure long term sustainability. The conservation area manager may need to make decisions

regarding significant events that impact their business, causing disruption, viewing substitute offerings as complementary to enrich tourist experiences, deciding to compete or cooperate. Decisions that conservation area managers deal with may also include the size of the business (stay small or grow), resilience (stay in or get out), power (creating a power advantage), building an agile business, differentiating the business offering, creating a niche, blocking competition or leaving the industry. Ultimately the conservation area manager has agency through decision making to plan for, cause, accept, fix, learn from or avoid positive and adverse outcomes.

Developing strategic foresight, setting direction as well as making decisions is a crucial part of the strategic management process. The previous two sections presented the critical variables a conservation tourist area need to consider when developing a strategic plan, and it is vital to understand how these variables interact with each other.

6.4 Remaining sustainable in a competitive environment while preserving environmental integrity

The question “what variables do conservation area managers need to consider in their plan to remain sustainable in a competitive environment while preserving environmental integrity?” speaks to the interconnectedness and interactions of the main variables that have an impact on the financial and environmental sustainability of conservation tourism businesses. Up to this point, the analysis of the data only provides us with data and information. According to Ackoff (1989), little focus is placed on differentiating between data, information, knowledge, understanding and wisdom. The raw data collected from the study needs to be turned into information through developing graphs and tables. According to Ackoff (1989), the difference between data and information is functional, not structural. Information conveys the who, what where and when but not the how-to which is conveyed by knowledge. Understanding is the conveyer of the why. Wisdom deals with values and the exercise of judgement.

According to Maani (2016: 17), knowledge is about solving problems, discovering facts and learning new ways. Understanding is about grasping the “bigger picture” and more in-depth insights about the interconnectedness between things. Synthesis, interconnectedness and “bigger picture” understanding will thus lead to understanding. Synthesising the knowledge gained through the analysis of the two studies leads to understanding by discovering the interconnectedness and is thus the final step in our developing of the thesis. Systems analysis provides us with the tools to see the bigger picture and connect the different parts of the study to unveil connections (Maani, 2016).

The interrelatedness of management of conservation areas, environment and the community is presented through a “big picture” depiction in the below CLD. The CLD indicate how the commercial success of the conservation entity can have an impact on other challenges faced by the local and international community. The CLD shows the interaction between the environment, society and the economy, as well as its interaction with the conservation tourism business. By improving the effectiveness and efficiency of private and publicly owned conservation areas, we can provide growth for land under conservation benefitting the environment as well as the stakeholders.

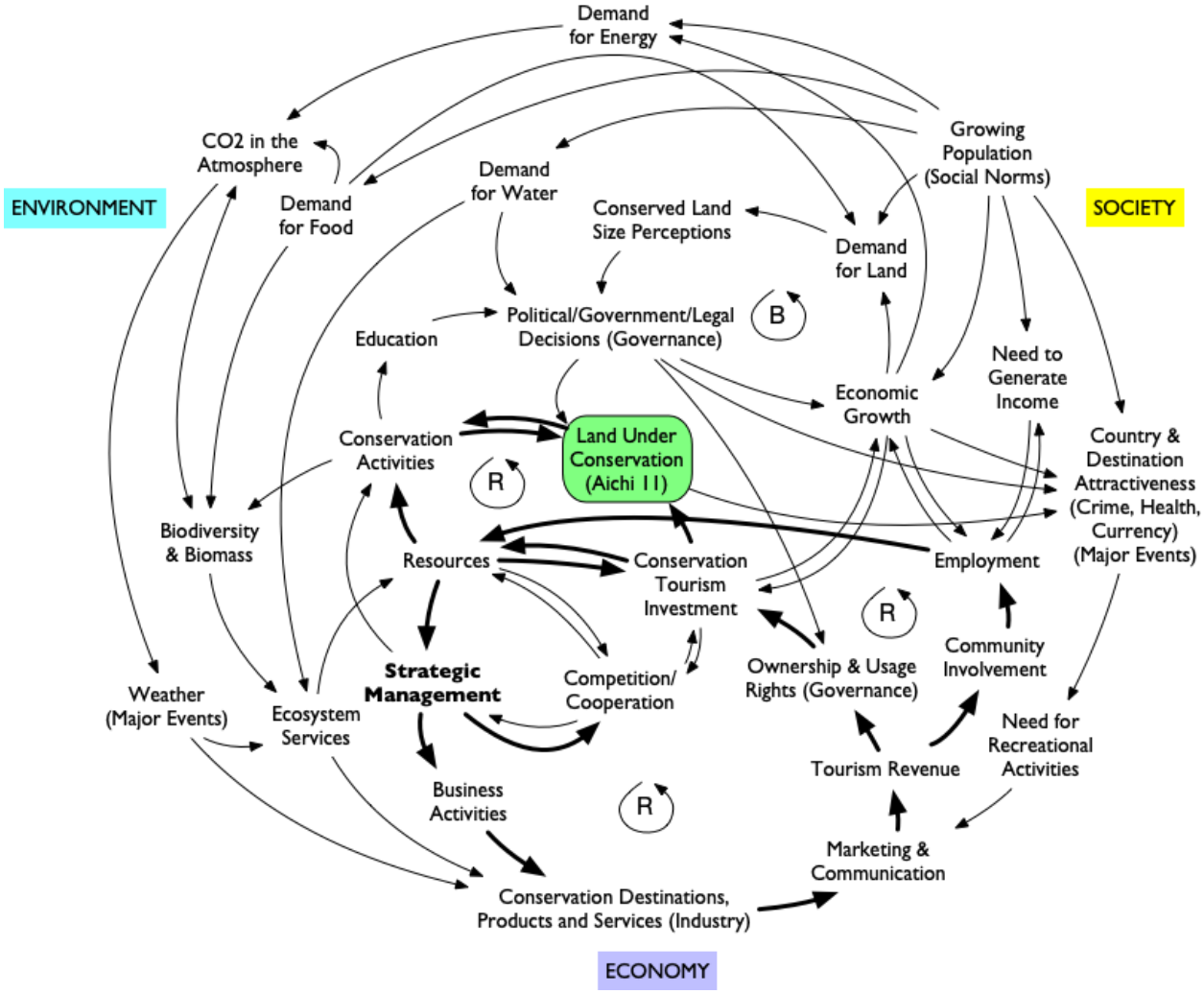

Figure 6.5: CLD for the Strategic Management of Conservation Areas

Source: Researcher’s compilation

The CLD in Figure 6.5 presents an interactive depiction of the environmental, societal and economic variables uncovered during the study. The centre of the CLD model depicts the stock, land under conservation in South Africa. The Dark arrows provide a representation of some of the critical aspects the conservation area manager has strategic control over. The three main loops

within the manager's sphere of control include the community and employment loop, The conservation investment/activity loop and the commercial process loop. All three these loops are reinforcing loops. Providing that the conservation area can build a successful commercial process, the tourism revenue can support conservation investment as well as community involvement and employment.

The commercial loop depicted at the bottom of Figure 6.5 highlights strategic management that utilises planning to allocate strategic resources to business and conservation activities. Strategic management also deals with decisions around competition and cooperation, as depicted in the diagram. The business activities include principal value-generating functions starting with destination, product or service development. Marketing and communication are required to present these products to prospective tourists. Successful marketing generates revenue, which dependent on the ownership or usage rights (the study included public, private and concession entities) can lead to investment back into the conservation tourism business. This investment in the business can provide resources as well as increasing land under conservation (purchasing more land).

Due to this being a reinforcing loop, the more this process is managed to generate revenue, the more is available for reinvestment back into the conservation area. Looking at the community/employment loop, the conservation tourism revenue also supports local communities as has been found in various of the conservation areas interviewed. Various of these conservation areas had employment and non-employment related initiatives with local communities in their area. Looking specifically at employment, these communities provide employment resources for the conservation areas, which in turn employs residents in rural areas where it is needed the most. Conservation tourism also starts having an impact on external variables such as the economy by feeding back through the provision of employment.

Investment in the conservation tourism business supports resources to run the conservation tourism business. It is clear from the interviews with private conservation areas their capital financing is self-generated through the commercial process. The resources support conservation activities that, in turn, conserve the abiotic and biotic variables, supporting biodiversity. Conservation activity also includes an education component, not only to the community and tourists but also to government groups. Reinvesting in the conservation area support not only conservation activities but also reinvestment in land expansion, ultimately growing land for conservation. The conservation area does, however, not live in a vacuum, external variables have an impact on conserved land.

Top right of the diagram depicts society and its needs. The demand for land balancing loop fall within this society sector and is responsible for a reduced pressure for land under conservation. Growing populations and economic growth result in a demand for land for housing and explicitly farming. Agriculture represents 57% of the land in South Africa (Oberem, 2016b: 12), the study of environmental perceptions has however indicated that South Africans do not connect the impact of farming and its environmental impact. The vast majority of respondents (68%) in the study has also indicated that the space allocated to native bush and forest in South Africa is adequate. With further expansion required such perceptions can influence the support South Africans give to expansion initiatives that political parties and ultimately, the government promote.

Finally, other external variables are depicted on the extremities of the diagram. The term country attractiveness was utilised for the various external pressures related to international tourism. Crime and currency, as well as political decisions such as the unabridged birth certificate, caused significant business pressures on the conservation areas interviewed. Climate emergency is a current critical consideration and the environment section top left depicts some ways in which this can impact on the conservation tourism area, but also how the conservation can reduce impact through increased biomass. Increased CO2 in the atmosphere has been linked to significant weather events which can impact conservation tourism business significantly. The environmental perceptions study showed that lack of water caused by drought as well as population pressures and mismanagement has been by far the most significant environmental impact respondents perceived.

The causal loop diagram depicts the interdependence of the environment, society and the economy and the unique position the conservation tourism business occupies in the system. In a complex multi-stakeholder environment, it is fundamental for a conservation area manager to have the frameworks and models to manage these variables and their interactions strategically.

6.5 Strategic business models and frameworks conservation area managers use

In the previous section, we uncovered how a strategic planning approach in the conservation management industry is well placed to provide a coordinating approach to leverage systems for increased financial and conservation performance in a complex multi-stakeholder environment. It is essential to understand what frameworks conservation area managers currently apply in the running of their concerns, answering the research question “What are the strategic business models of and frameworks sustainable conservation areas conservation area managers currently utilising in their planning?” The study investigated conservation area managers current planning practices by prompting them on current tools and planning practices during the conservation area stakeholder interviews.

Public conservation areas tended to follow a prescriptive, centralised planning approach. The planning included an annual one, three and five-year plan *"Tourism (Cape Nature) have got a strategic plan, …and we know how much we have on a 3-year cycle. And then we have this 5-year strategic plan and one of them includes tourism"* (14GS, 2015). The planning seems to have a limited focus on developing new ways for income generation, but rather focus on biodiversity. The annual plan includes all aspects of running the protected areas soil erosion, vegetation, monitoring, facilities, law, fires, budget and resources. Operators with concessions in the national parks are required to adhere to the public conservation plans. *"We operate in …National Parks, we have to adjust to their rules and their systems so we have less say, so we will fit in with what has to be done…"* (1PL, 2015).

Private conservation areas are less regulated than public conservation areas unless they have concessions in public conservation areas. The result is thus a mix of different planning approaches, including some with a more prescriptive and other emergent approaches. One private conservation area at the time of the interview just completed their first strategic plan with a consultant. When prompted for their strategic planning cycles, the responses ranged between weekly, annual and up to six years. One conservation area seems to follow a very flexible emergent approach with weekly meetings rather than an overall plan.

When looking at the type of planning that interviewees performed, it is clear that most of the planning is conducted from a resource perspective rather than looking at activities and competition. "If you don't manage that properly there is no point in having competition cause there will be nothing left to compete with otherwise. Yes resource management for sure" (5SO, 2015). One interviewee did indicate that the customer-focused departments will look at competitors. One respondent interviewee, when prompted about the strategic plan, did start explaining the budgeting process. According to Rumelt (Rumelt, 2012) budgeting is not a strategy "the enemy of a good strategy in most governments and most businesses is this quarterly maybe monthly drumbeat of the budget, at senior management the extend the budget to 3 years and five years and they call it strategic planning. Now that's not strategy."

When prompted for specific models or frameworks, the respondents were not able to come up with any specific models or frameworks they use. One respondent indicated they use a SWOT analysis. *"I don't know of any model that it based against… No specific model, no…"* (1PL, 2015). Respondents were, however, familiar with iterative conservation frameworks such as adaptive management, making it essential to incorporate such a design in any proposed strategic planning framework for conservation area managers.

6.6 Systems thinking approach to strategic planning of conservation areas

Up to this point, the study has looked retrospectively at the variables and the systemic linkages between the variables the study has uncovered. Stroh (2015) indicates that systems thinking can be utilised prospectively to create a road map through the complexity of multiple interdependent variables. This section aims to build just such a roadmap by answering the research question "What constitutes a strategic management framework for conservation areas to optimise their long term financial and environmental sustainability?" Utilising a systems thinking approach to develop such a roadmap holds several advantages:

1. By using forward feeding balancing and reinforcing loops with a cause and effect relationship, we visualise how natural and social systems unfold.
2. Provides a way to optimize not just the variables but the relationships between them.
3. Provides a non-static approach by integrating multiple variables in a logical sequence over time.
4. Takes time delay into account.
5. Includes both short term and long term approaches to ensure sustainability (Stroh, 2015).

The approach provides further benefit unique to the conservation tourism industry. Conservation area managers are trained on iterative planning cycles as well as ecosystems, making the integration of such a framework aligned with their training. The conservation tourism industry is truly a multi-stakeholder environment where management has to deal with multiple critical variables and often seemingly conflicting objectives. Systems thinking is ideal due to its integrative approach, providing the possibility to incorporate environmental, societal and economic variables into the strategic plan. Figure 6.6 provides such a prospectively focused iterative, systems thinking approach for the strategic management of conservation areas.

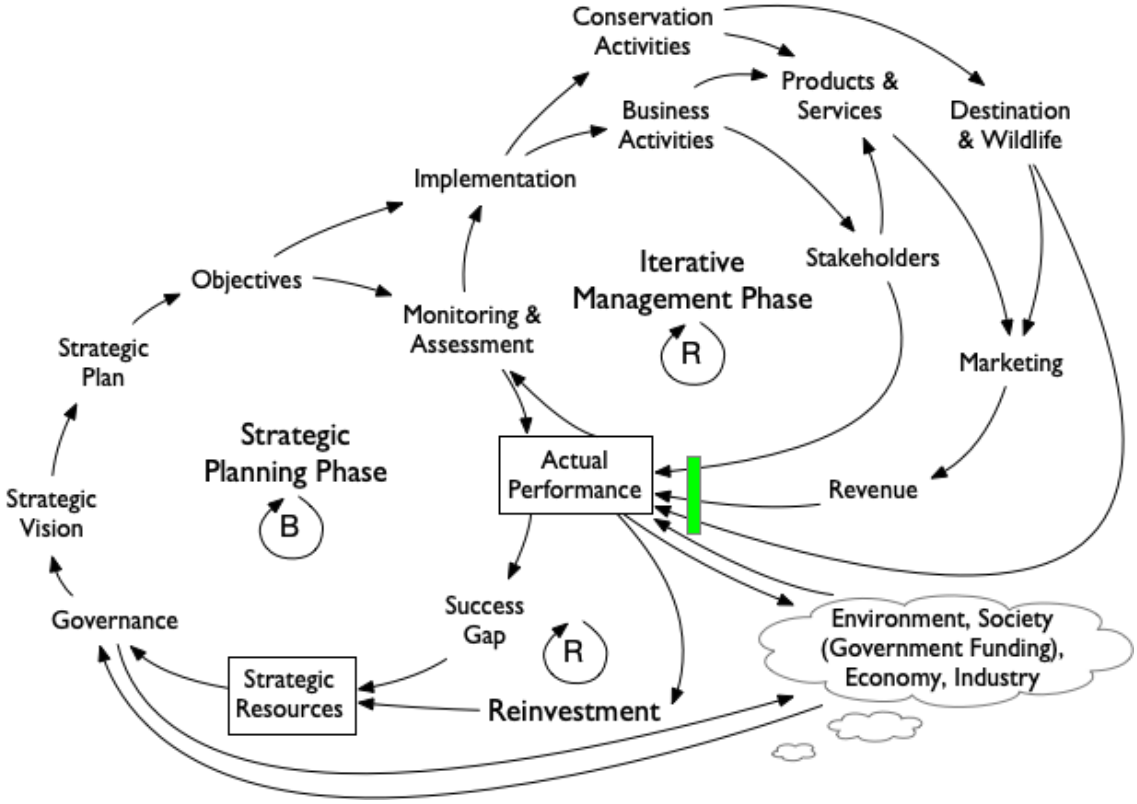

Figure 6.6: Systems thinking approach to strategic planning of conservation areas

Source: Researcher's compilation

The systems thinking approach to strategic planning in Figure 6.6 includes the actual performance and the success gap, as proposed by Stroh (2015:2805) in his goal achievements theory systems diagram. The green marker indicates the triple bottom line including environment, society and economics, all three elements are required as actual performance measures. The external environmental variables are depicted in a thought cloud on the bottom right signifying the influence of biases and heuristics on our perceptions. The external environmental variables have a direct influence on actual performance (as we have seen with the significant events impacting conservation businesses). However, the actual performance also has feedback on the environmental variables. The External environmental variables link to the strategic planning process through governance and the strategic vision. Good governance is required to ensure positive as well as limiting negative feedback. Strategic vision requires strategic foresight of the external environmental variables to plan for the future.

The strategic planning phase in the diagram includes a balancing loop that incorporates a success gap, as well as a reinforcing loop reinvesting returns from the actual performance. The net result of the gap and reinvestment provides the management team with strategic resources, including natural, societal as well as economic. Good governance is required to be the custodian of not only these resources but also external variables. The resource endowment and external variables

serve as an ingredient to support the vision, which is evolving with the process. The vision and resources inform the strategic plan, which ultimately provides objectives to inform the implementation and iterative planning cycle. These plans and objectives also feedback and are monitored and assessed against actual performance to be adjusted for the strategic iteration.

“Strategy is visible as a coordinated action imposed on a system” (Rumelt, 2011:92). Managers need to be implementing consistently, rather than an implementation phase at the end of a strategic plan, the strategy is imposed on the iterative management cycle. The implementation includes business activities (which includes stakeholders or societal variables) as well as conservation activities. Conservation and business activities are interdependent as the conserved destination not only provide the canvas for products and services but also the destination as an attraction. According to Slabbert and Viviers (2012), three critical factors can be used to attract visitors to parks: park activities, park attributes and educational value (eco-activities) which align strongly with the study results and this framework. Through marketing, the products, services and destination variables provide revenue opportunities.

Ultimately the business cycle feeds back into the strategic planning cycle through the monitoring and assessment of the actual performance and determination of the success gap and reinvestment opportunities. The iterative management phase variables are kept very limited to focus on the key deliverables and to provide managers with a generic approach that can be supplemented with crucial variables unique to the individual conservation area. Together the strategic planning and the management cycle delivers a prospective growth loop, that not only include revenue growth but also includes conservation and stakeholder performance variables. The next section will provide an overview of how this approach differs from other frameworks.

6.7 Systems thinking approach to strategic management compared to other frameworks

The proposed BIESE framework and the systems approach to strategic management can be classed as a descriptive emergent approach to strategic management. According to the ten schools of strategy this systems thinking approach most closely aligns with the learning school, we learn to adapt as we go. It does, however, incorporate aspects from the environmental (external environment does have key influences) and configuration school (we have to adapt to situations) (Mintzberg and Lampet, 1999). The systems approach provides an opportunity to incorporate feedback going further than just acknowledging the impact of the environmental-variables on the corporation but also the corporation’s impact on the environment, acknowledging actual performance.

The research shows and the framework acknowledges the notion that external macro-environmental variables impact on the business but realigns them into environmental, societal, economic and industry categories. The systems thinking approach acknowledges that certain industry variables as proposed by Porter (1979) are key to the performance of the conservation area and that strategic industry choice can be a determinant variable in the conservation area performance. In a complex multi-stakeholder environment, the industry is, however, not independent from any of the other variables and the lines where industry begin or end is often blurry. The systems approach steps away from the linear positioning approach but do acknowledge the importance of goals and vision in driving performance. Through its destination, products and services, the conservation tourism area has to differentiate their offering to appropriate markets to be it, international or local.

The interviewees made it clear that conservation areas are rather managed from a perspective of resources that of competition and activities. The systems perspective includes this as a stock in the system as ‘Strategic Resources’. The systems perspective provides a unique way of showing the interactions between activities and resources (stocks) without having to choose, making the activity, resource debate moot. The systems approach to strategic planning incorporates the broader stakeholder term as proposed by Freeman (2004, 2010) including external and internal stakeholders in the iterative management phase as well as in the concept of governance in the strategic phase.

The systems thinking approach incorporates and complements the adaptive management approach that includes a setup phase and an iterative phase. The strategic systems perspective replaces the setup phase with an iterative longer-term strategic planning phase. The systems diagram incorporates stakeholders, objectives, monitoring and assessment from the adaptive management approach (Williams, Szaro and Shapiro, 2009). Unlike the Conservation Investment Toolkit, the systems approach views the strategic planning from a business or conservation area managers’ perspective rather than that of a government. The systems approach does incorporate all three responsibilities the toolkit allocates to the protected area manager namely: 1) a detailed plan for tourism zones, products, infrastructure, capacity and source markets, 2) stakeholder communication and 3) monitoring and evaluation systems (Space for Giants and Conservation Capital, 2019).

A systems approach ultimately delivers a dynamic, rather than a static approach to strategic management. It is providing a more integrative solution to navigate a complex multi-stakeholder environment than linear approaches. Incorporating growth drivers without removing the responsibility to manage feedback that impact society and the environment.

6.8 Framework critique

The BIESE framework provides a list of variables that impact on the success of the conservation area. It is essential to uncover which of these variables have a more significant impact on the conservation area. Due to the methodology, this research does not provide a quantitative measure of the variables and their level of influence on the conservation area. Future studies could include methods to understand differences in the variable influence.

The framework looks at conservation area management from the view of the conservation area manager rather than government departments. Future studies could include the perspectives of officials in the South African Department of Environmental Affairs. Figure 6.5 the CLD for the strategic management of conservation areas provides a holistic view of the government and its impact. The conservation investment toolkit (Space for Giants and Conservation Capital, 2019) provides a further indication where the government decision making could fit in the process.

The CLD provides an indication of the cause and effect relationship of individual variables as identified during the study. This cause and effect relationship has to, however, be tested through experimentation to understand the genuine causal relationships. The causal loop diagram could also be used to uncover leverage points of maximum improvement with conservation area managers. The study provides many opportunities for future testing and research.

6.9 Summary

The study utilised framework development to uncover a large number of variables and their interaction. A systems thinking approach was utilised to develop such a framework. Firstly, the study uncovered which variables impacted the success of conservation areas financially and environmentally utilising stakeholders and general public opinions.

The BIESE framework presented in Figure 6.1 provides the variables that have an impact on conservation area management success uncovered during the study. The framework includes environmental factors, societal, economic, industry and business factors. Although McGahan and Porter (1997) provided substantiation of the importance of the industry in the results of the firm. The results of this study indicated that such industry factors are not seen, by stakeholders, as the critical factors in conservation tourism industry success.

The study compared the results of the research with key theoretical frameworks, the crucial framework being Porters (1979, 2008) Five Forces Model. Figure 6.3 indicates that although these frameworks prove to help categorise and uncover fundamental forces impacting on the conservation area. They have many overlapping variables, unclear boundaries and do not cover

all the variables conservation areas need to consider to plan for conservation and financial success strategically.

Finally, Figure 6.6 provides a planning framework outlining the process conservation area managers can follow to develop their strategic plan and how it interacts with the day to day iterative management of the conservation area. The CLD indicates how critical governance, stakeholders and the external environment is in this planning process. The prospective systems diagram provides an iterative rather than a static view of the planning process with the ultimate objective to deliver actual performance.

Chapter 7 summarises the findings of the study and highlights the implications and recommendations that flow from it. The chapter also looks at the limitations of the study and suggestions for future research.

CHAPTER 7: CONCLUSION

"Since everything is interrelated, since all things depend one upon another, nothing is absolute, nothing is separate, but all are part of the one indivisible whole." ~ Thich Thien-An (Cited in Akama, 2017:6)

7.1 Introduction

The study investigated the strategic management of conservation areas, specifically conservation tourism areas. The conservation tourism industry operates in a complex multi-stakeholder environment, often managing multiple conflicting goals. At the outset of the study contemporary strategic management solutions was proposed as a solution to help conservation area managers deal with such a complex external environment. Ultimately the study highlighted the variables conservation areas need to consider in their strategic planning as well a planning approach to develop strategic conservation tourism area management plans.

The purpose of the study was to examine contemporary environmental and business management thinking in order to understand the complex environmental, societal and conservation tourism industry variables and their role in securing land for conservation, incorporating the learnings in the development of a strategic management framework for the sustainable management of conservation areas. To deliver on this purpose the study aimed to answer the following primary and sub research questions.

The primary research question the study addresses is, how do conservation businesses strategically plan for long term financial and environmental sustainability taking into account complex environmental, societal, and industry variables, ultimately securing the land for conservation? The primary research question was informed by five sub-questions:

1. What environmental, societal, industry and business variables has a substantial impact on conservation area success?

2. Does the contemporary strategic planning frameworks utilised in management and environmental sciences address the strategic planning needs of conservation area managers?

3. What are the strategic business models and frameworks are conservation area managers currently utilising in their planning?

4. What variables do conservation area managers need to consider in their plan to remain sustainable in a competitive environment while preserving environmental integrity?

5. What constitutes a strategic management framework for conservation areas to optimise their long term financial and environmental sustainability?

A descriptive exploratory research study was conducted to deliver on these questions. The study utilised a qualitatively driven concurrent mixed method research design to integrate general public opinions through a validated quantitative survey with qualitative semi-structured conservation management interviews. Respondents were identified using a purposive sampling technique. Data collection methods included an online survey for the quantitative environmental perceptions study as well as semi-structured face-to-face interviews for the stakeholder interviews. The results from the quantitative and qualitative studies were presented in chapter four and five.

The study uncovered multiple variables that have considered in the strategic management of conservation areas in the complex conservation tourism environment, a systems thinking approach was utilised to analyse the results and synthesize a framework for the strategic management of conservation areas. The findings address the shortcomings of the current conservation tourism literature in addressing conservation tourism strategy development as well as some practical considerations for conservation managers and industry stakeholders.

7.2 Findings

The study highlighted the critical variables that the conservation area manager need to take into consideration during the strategic planning cycle. These critical variables were classed within the well-known environment, society and economy depiction (Lozano, 2008; WWF, 2014; Rockström and Sukhdev, 2016). A literature review of the strategic management process highlighted the importance of the industry variables in the success of the organisation. Up to 36% of the organisation's profitability variance can be attributed to industry variance (McGahan and Porter, 1997). How industries are defined and the distinction between organisational variables and industry variables are not always clear. The proponents of the resource perspective provide the argument that managing the firm for resources and core competencies is critical in strategic planning (Prahalad and Hamel, 1990; Rumelt, 1991).

7.2.1 Critical success variables for strategic conservation management

The BIESE framework presented in a simplified depiction in Figure 7.1 incorporates the industry as well as business variables in the environment, society, economy framework. Providing a conservation area manager with an external and internal perspective of the main variables that impact on the conservation area business success. The dotted lines and blue arrows represented in the interrelated nature of the variables. The framework is certainly not linear, for example, variables in the environment affect the business directly, and business decisions affect the

environment. The directionality of the circles toward a vision or raison d'être provides a visual representation of the importance of vision because "we'll never produce results that we can't envision" (Meadows, 1987).

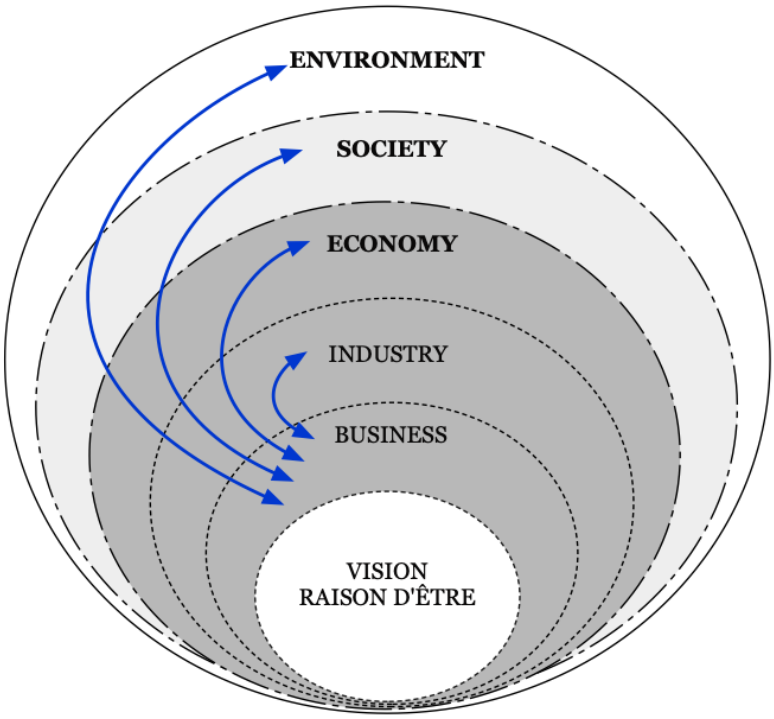

Figure 7.1: Simplified BIESE framework

Source: Researcher's compilation

Although, the research highlighted clear biases and heuristics in the perceptions of the respondents in the study of environmental perceptions, the pressure-state-response framework (Hughey *et al.*, 2004) provided a good way to measure South Africans perception of the quantity of land under conservation as well as the quality of management. The majority of South Africans (52.2%) surveyed perceived the overall state of the environment as negative. This was not the case for the space allocated to land under conservation, respondents felt national parks (77.8%), as well as native bush and forest (71.8%), had moderate to high land allocation. Respondents also felt national parks (69.7%) were well managed but overall the native bush and forests received a 54% negative rating for management.

The perceived causes of environmental damage to the native forests and bush were thought to be urban development (17.7%) and industrial activities (15.8%). Farming, highest on the list of impact variables by the Department of Environmental Affairs (2014) scored a meagre 6.2% and was listed 8th be respondents. A clear bias was also seen when the land allocation was compared to the lack of Aichi target achievement. It is critical to take cognisance of these biases and

heuristics, not only does it indicate stakeholder biases but also that general societal underlying mental models can affect policy decisions.

The framework describes how these societal variables and mental models affect the conservation tourism business under the society category. Political decisions and legal frameworks are created by societies based on their perceptions. If voters feel that national parks are well managed and the land allocated to conservation is adequate, a limited motivation will exist for voters, communities and other stakeholders to support conservation expansion, ultimately affecting public budget allocation. This highlights the importance of education and stakeholder management. Interviewees highlighted the importance of community and stakeholder involvement *"People first,… if they are happy we are happy. If they are not (happy) we are not. Because we have to, it is their future and ours so our relationship in terms of that has to be shared"* (8PS, 2015).

The notion of country attractiveness is introduced. Mental models, biases and heuristics of international tourists affect their choice of the destination country. Fears linked to for example Ebola in an African country with no link to South Africa can have an impact on South African inbound tourism. Policy changes related to travel documentation such as the unabridged birth certificate can cause a substantial decrease in tourists, directly affecting conservation tourism business. Crime is another social variable that has proven to have an impact on the country attractiveness. Country attractiveness is also affected by the economy.

The economy plays a substantial role in the conservation tourism industry. Firstly the public budget allocation and subsequently the public conservation areas are dependent on the performance of the economy. Secondly, economic performance affects investment in private conservation initiatives. Thirdly, the economy affects local tourism, and finally, the Rand exchange rate affects the attractiveness of the country for international tourists *"it helps when the Rand goes down against the Dollar"* (13SO, 2015). The economy is not only the indicators we monitor, but also the cumulative result of industry, individual business and ultimately individual actions.

The industry variables formed a central part of the study as, ultimately, the study investigated the tourism conservation industry and the development of a strategic framework applied to the industry. Porter's five forces model (1979) is a central framework investigated in the study not only because of the importance of the industry to the firms' ultimate results but also to understand its effectiveness as a tool for conservation tourism. Although the industry growth and local tourism market success has a clear impact on the conservation business, the five forces do not seem to be the drivers. The framework proved to have limited effectiveness, not because these variables are not present, but rather because there are more important variables at play in this industry.

- The “threat of substitute force” had limited importance as in the tourism environment alternate destinations are complementors for an enhanced tourist experience.

- Supplier power is limited.

- Customer power (Individual) tourist power is limited but enhanced by technological development.

- Intermediaries are more powerful than individual customers, a force not recognised by the framework.

- The threat of new entry is present but limited by land availability.

- Competition is a variable, but subdued due to the exceptional range of opportunities to differentiate, for example, international vs local, high end vs budget, adventure vs relaxation and consumptive vs non-consumptive.

- The country attractiveness or international tourism growth (and threat of decline), tend to affect the industry attractiveness more than the above forces. This may be classed competition between South Africa and other countries for tourists, but it does not fit at the business level.

- Cooperation, not recognised by the framework is fundamental, the conservation motive is very reliant on cooperation. Public-private partnerships, as well as cooperation between conservation areas, is key to delivering on conservation and in some case commercial objectives.

- Most of the forces are weak, yet the conservation tourism industry is not very lucrative due to the very high capital outlay requirements and the nature of the business. Making Porter’s five forces models predictive ability very limited in this industry.

Although the industry variables are important to consider in the strategic planning process, the interviewees did not prioritise it in their planning. *“I don’t think so. We don’t see ourselves as in competition with any of the other of the conservation areas…”* (7GS, 2015). The commercial and conservation management processes proved to be a more prevalent focus. Interviewees readily confirmed that managing for resources was their primary concern. Conservation area managers spent time managing the people, conservation area, wildlife, buildings, tourism products and services, and tourists. The critical variables in the business or commercial environment differ substantially based on the type of business being tourism, game ranching or public conservation area.

The vision or reason for the existence of the organisation is critical. Conservation area managers find themselves managing diverse sometimes clashing objectives. Dependent on if the conservation area is public or private the commercial objectives differ widely. Public organisations had to become entrepreneurial due to the budget constraints, bureaucracy and inefficiency. These areas do however have protection from the devastation of a failing business, that for-profit conservation companies deal with. Although some of the conservation areas indicated their main objective is profit/income and other indicated biodiversity, the fact remains the entities had a vision or purpose to exist.

7.2.2 Strategic planning approach for conservation areas

Figure 6.5 provides a CLD, a systems thinking approach was utilised to synthesize the study results to investigate the interactions between the variables. The diagram highlights the conservation areas commercial, conservation and social actions and how it interacts with external macro-environmental forces. Systems thinking is ideal for, not only visualising these connections but also for uncovering causal linkages (Maani, 2016). Strategic management is central to managing these connections. The commercial process of the conservation area provides investment opportunities to secure land for conservation, supports communities through employment and other services as well as delivers economic growth.

Systems thinking can be used prospectively (Stroh, 2015), Figure 6.6 proposes a strategic planning cycle, interlinked with an iterative management phase. This systems thinking approach to strategic planning provides an iterative approach to strategic planning with a clear focus on growth. Systems thinking can be used prospectively (Stroh, 2015), Figure 6.6 proposes a strategic planning cycle, interlinked with an iterative management phase. This systems thinking approach to strategic planning provides an iterative approach to strategic planning with a clear focus on growth.

The framework clearly shows how actual performance is dependent on external and internal factors. The balancing and feedback loops indicate how critical the performance of the conservation can deliver reinvestment in conservation. The success gap in the framework provides such a balancing loop, intercepting the reinvestment (reinforcing) loop, limiting the business and conservation reinvestment. Strategic planning provides the platform to close this success gap. Feeding into the iterative management phase to optimise business and conservation activities in the conservation area.

Strategic management provides a mighty lever to change a system. Figure 6.5 indicates how highly interrelated the environment, society, the economy and the conservation tourism industry

is. Strategic management of conservation areas provides a unique lever to affect this system through business decisions that can have a lasting impact on the environment, society and the economy. The strategic manager holds in his power the six most crucial levers for affecting change in a system:

6. The structure of information flows (who does and does not have access to information) (Meadows, 1999:3). The strategic manager holds within his toolbox the means to structure the firm to control information flow internally but also heeds the power to manipulate external information flows to affect the system.

5. The rules of the system (such as incentives, punishments, constraints) (Meadows, 1999:3). A strategy is historically the function that determines the rules of the system. What industry, product, services and markets do the conservation area operate in? The strategist also holds within his power the choice to compete or cooperate, providing a wide range of opportunities not only for conservation but also for society.

4. The power to add, change, evolve or self-organise system structure (Meadows, 1999:3). The strategic manager should control the iterative process. Changing and evolving systems over time to self-organise and learn.

3. The goals of the system (Meadows, 1999:3). The goals of the system drive results and is a critical tool in the strategist's toolbox to use to deliver results. By creating goals in the system, the strategist can alter the direction of the corporation or conservation area manager to affect the system.

2. The mindset or paradigm out of which the system arises (Meadows, 1999:3). The second most crucial lever at the strategist's disposal is to understand and change mindsets. By being cognisant of perceptions and mindsets and by affecting a systems goals, structure, rules, delays and parameters to change these mindsets, the strategist can affect the system.

1. The power to transcend paradigms (Meadows, 1999:3). Finally, the most critical lever at the strategist's disposal is to transcend paradigms by staying unattached to world views and letting go into the not knowing, embracing change. Sailing into the blue ocean into truly uncharted waters going where others have not gone before (Kim and Mauborgne, 2004).

7.3 Implications and recommendations

The study has provided a range of implications and recommendations. Firstly, the implications to literature are discussed, providing a shortlist of implications to current frameworks and literature. Secondly, the study delivered implications for conservation area managers in practice.

7.3.1 Implications to literature

Academic fields of study drift apart due to specialisation very seldom do they meet or cross-reference each other (Epstein, 2019). Overspecialisation can lead to missed opportunities. This study traverses two fields of study, strategic business management in the management or social sciences and the management of conservation areas in the environmental sciences. By working across two different scientific domains, the study bridges the gap between frameworks developed in these different disciplines. The study also bridges the gap between public and private conservation area strategic management.

The study provides a framework for the strategic management of conservation areas. Firstly, outlining the variables of importance to strategic conservation area management and categorising them into a framework of critical variables, and showing how these variables relate to current scientific literature. Finally, using systems thinking prospectively to develop a strategic planning process and to show the integrative nature of the conservation tourism industry

The study investigates the usefulness of various frameworks, with the key framework under investigation, Porter's five forces model (Porter, 1979; 2008). Although Porter (2008) indicates that the five forces model works equally well for all industries. The study indicates that although the five forces model provides a useful perspective, it falls short in that it excludes intermediaries that are key to the tourism industry and it excludes complementors. Substitutes such as city tourism can be a complementor as tourists look for variety in this industry. The variables in the model do not prove to be the most fundamental forces in this industry.

The research introduces the validated environmental perceptions study (Hughey *et al.*, 2004) from New Zealand into the South African body of knowledge. Utilising the pressure, state, response model, the study indicates how South Africans view the current state of their environment, the pressures on it and what actions respondents are taking concerning these pressures. The study also shows the usefulness of the pressure, state, response model in evaluating the state of the environment.

The importance of heuristics and perceptions in the plight of increased land under conservation is highlighted. The study introduces the concept that respondents to the study of environmental perceptions overestimate the quantity of land under conservation. Although South Africa falls well short of the Aichi 11 target, the majority of respondents feel that the natural bush (68.8%) and national parks (77.8%) are moderate to high (CBD, 2018). Further research could clarify some of these results.

7.3.2 Implications in practice

The study has implications for government policy decision making, general management as well as conservation tourism industry management.

7.3.2.1 Government policy implications

The study provides a clear picture of how important the conservation tourism industry is not only to the environment but also to local communities and the economy as a whole. With 80% of tourists heading for Africa including some wildlife aspect to their tour, the industry's economic impact as well as employment creation in rural areas, it is critical to continue developing this industry (Space for Giants and Conservation Capital, 2019).

The study of public perceptions provides information for public decision making. The South African environmental perceptions research indicated that only 45.5% of respondents found the state of South Africa's environment acceptable, whereas, 73.8% of New Zealand respondents found the state of the New Zealand environment acceptable (Hughey, Kerr and Cullen, 2016). The detailed response regarding the state and pressure on publicly managed resources can inform public decision making to help address this gap.

The research highlighted the divisive nature of the current public conservation model. The split of national conservation assets between national, provincial and municipal conservation areas not only affect the optimisation of resources but also affect conservation decisions and cooperation between departments. One single conservation body would motivate cooperation between departments and ultimately benefit conservation.

The study indicates how critical government policy decisions are in the development of tourism as well as deterring tourists. One decision related to the visa requirements of foreigners can have a negative impact on a conservation tourism company to the effect of a 40% decline in business. Country attractiveness compared to other African countries is critical, and a wide range of policy decisions affect the tourism market.

7.3.2.2 General management implications

The research provides a framework for strategic planning. The generic planning framework is based on a systems thinking approach, using the well know CLD, and could thus with further research, easily be adapted to other complex multi-stakeholder organisations. The prospective systems thinking approach provides a generic tool for developing strategic planning approaches tailored to a specific organisation.

The frameworks developed during the study provides a practical strategic tool to the conservation area manager to assist in the strategic planning process. The BIESE framework in figure 6.1 developed through this research provides a visual framework to the conservation area about key variables they need to consider in developing the strategic plan. The systems thinking approach to the strategic planning of conservation areas in figure 6.6 provides a planning roadmap that will assist in provides a strategic perspective of the conservation area that incorporates the value-creating activities as well as the conservation activities at the business level.

The study of public perceptions as developed, validated and implemented in New Zealand and has been running for 15 years. The South African results in this research provide a measure for business managers to understand the perceptions of the general public regarding the state of the environment, pressures on, as well as the most prevalent actions respondents are taking to address this. This information can be specifically useful for managers to draft their environmental strategy and communication plan.

7.3.2.3 Conservation tourism management implications

The study provides a framework for the strategic management of public and private conservation areas which can assist in the planning processes of conservation area managers in tourism as well as the conservation roles. The framework delivers the essential variables conservation area managers need to consider in their planning as well as provide a planning approach to follow. The data collection spanned a broad selection of biomes in South Africa, improving the framework's regional relevance.

The study highlights the need for a more integrated conservation tourism industry, closing the gaps not only between national, provincial and municipal conservation areas as well as public and private conservation areas but also between conservation and tourism roles within the organisations. Utilising strategic management to coordinate functions in conservation areas can reduce the siloed approach, where tourism and conservation management have limited interaction. The study shows how the management of the conservation business cannot be split from the conservation activities.

The importance of business management training for conservation area managers is evident. Conservation area managers were very well versed in the conservation activities they deal with. Much of what the conservation area managers have to manage on a day to day basis include management functions, marketing, budgeting, and dealing with employees and stakeholders. Classic conservation training does not equip the conservation area mangers for these roles.

Once again, this study highlights the importance of stakeholders in the conservation tourism business. Communities and other stakeholders can make or break the conservation initiative. Conservation area managers must continue working with local stakeholders to add value back into these communities through local sourcing, employment and other corporate social responsibility activities.

The study indicates the importance of strategic planning but also the lack of strategic planning at the business level in the conservation tourism industry. Public conservation area managers deliver legislated management plans to their departments which highlight their budgets and tourism activities with limited strategic scope. Private conservation areas planning also include limited strategic focus.

7.3.3 Implications to methodology

The study utilised a systems thinking approach to synthesise the results from the mixed-method study. Systems thinking proved to be a valuable approach to address the complexity that the conservation area manager needs to deal with during strategic planning. The approach not only highlights the interconnectedness of the rich array of variables, the conservation area manager need to deal with but also when used prospectively can assist in modelling the strategic planning approach.

7.4 Contribution to the body of knowledge

Historically the approach to conservation has been to try and restrict and curb human encroachment on wildlife and protected areas. A significant body of knowledge exists to limit human impact on conservation areas. Although reducing human impact is exceptionally important to curb habitat destruction, it only partly achieves biodiversity objectives; other drivers are also fundamental. One such driver critical for biodiversity, especially in Africa, is the area of protected land (Howard, Flather and Stephens, 2020). To increase land under conservation, an expansive approach to conservation is critical.

Strategic management is the function that takes external and internal environmental factors into account and by using long term planning and strategic action, drive expansion. Strategic management has received minimal attention in the environmental sciences. To drive expansion, it is critical also to reduce siloed thinking approaches and improve strategic management skills in private and public conservation initiatives. This study proposes a strategic framework and approach to strategically manage conservation entities for the expansion of private and public conservation areas in South Africa.

7.5 Limitations

Strategic management, as well as systems thinking, utilises induction to develop causal inferences. Due to its inductive approach, this study draws on observations and experiences of respondents, stakeholders and the researcher to draw inferences. The perceptions of the respondents, stakeholders and researcher are subject to biases and heuristics and can deliver flawed interpretations (Kahneman *et al.*, 1974).

The study utilises a descriptive exploratory research approach and is thus valid for descriptive purposes. Causal inferences should be validated through experimental design. The sampling utilised a non-probability purposive sampling approach which put further restrictions on inferences that can be drawn from the results of the quantitative study. The quantitative study sample was skewed to white minority respondents, and results should thus be tested by including more extensive samples of the majority population. In its current form, the study has a demographic profile that could represent the viewpoint of the typical domestic tourist visiting nature-based tourism attractions such as the South African National Parks.

The study is limited to the South African study area, and specifically to the conservation tourism industry in South Africa concerning implications for other African conservation areas by stakeholders. Although many of the theoretical frameworks under review are generic frameworks, this study tests its applicability to the conservation tourism industry in South Africa. The study is limited to strategic planning approaches and has minimal application to strategic choice or implementation.

7.6 Suggestions for future studies

Various opportunities for further research was highlighted while conducting this research. Quantitative validation of the importance of the variables in the framework as well as the systemic interaction in the CLD models would be a natural progression from this study.

Testing the framework by developing a strategic plan in consultation with conservation area managers would provide valuable feedback on the variables as well as the proposed strategic planning framework.

Although the qualitative study included a broad selection of conservation stakeholders, future studies could be expanded to include leadership from a broader selection of national conservation and tourism organisations as their contribution to the framework is critical.

The quantitative environmental perceptions study offers further opportunities. As the New Zealand study has been conducted for more than 15 years (Hughey, Kerr and Cullen, 2016),

follow up studies could be conducted. Adding a question about Space allocated to private reserves would enrich the results. Questions can be expanded to cover specific conservation initiatives. The study can be expanded to include a larger rural and black majority sample.

7.7 Conclusion

Vertebrate species have declined by 60% since 1970 (WWF, 2018). Some view the current declines as the sixth extinction (Kolbert, 2014). Conservation areas are not only tasked to preserve the conservation area they take responsibility for but also to be part of the bigger solution for global biodiversity. This study draws on two domains, the environmental and business sciences to increase conservation area management effectiveness to fund conservation expansion, to ultimately increase land under conservation which is indeed an intractable and wicked problem, for which domain-based solutions are often inferior (Joni, 2013; Epstein, 2019).

To get an understanding of South Africans' perceptions of the quantity of land under conservation and quality the current conservation management as well as the pressures they perceive on the environment and environmental perceptions study was undertaken. The study provided a clear indication that although the majority of South African respondents found the environment not acceptable overall, they felt that the quantity of land under conservation are moderate to high for national parks and native bush and forests. Respondents also felt national parks were well managed, but a slight majority felt native bush and forests were not. Interviews with conservation area managers provided insights into their strategic management and planning practices.

The research investigated the effectiveness of some of the significant strategic management tools in the business domain as well as planning tools in the environmental sciences to understand their effectiveness in the conservation tourism industry. The study specifically investigated the PESTLE external environment framework, stakeholder models (Freeman, 2010) and Porter's five forces model (Porter, 1979; 2008) as well as other environmental and strategic frameworks and viewpoints. The results indicated that although the frameworks provide an excellent guideline of variables to take into account in the strategic planning process, they fell short of including some critical variables.

The BIESE framework developed using a systems thinking approach firstly provides an outline of the variables conservation area managers need to take into account when strategically managing the conservation area. The variables were categorised in the familiar environment, society, economy framework, with the economy section expanded to include industry and business factors. The framework also provided a depiction of the non-linear interaction between the

variables. Finally, the interaction between the main variables was depicted in a CLD prospectively to provide an iterative strategic planning approach.

To avoid climate change, conserve species and secure ecosystem services, the latest research shows we need to conserve 30% of earth formally by 2030 (Dinerstein *et al.*, 2019). With between 6.5 and 7.8% of South Africa's land officially proclaimed as protected areas, this is a fantastical target to achieve. This goal is only possible if national, provincial, municipal and private conservation areas cumulatively follow an aggressive land expansion strategy, and develop the means to fund it.

"Right now, in the amazing moment that to us counts as the present, we are deciding, without quite meaning to, which evolutionary pathways will remain open and which will forever be closed. No other creature has ever managed this, and it will, unfortunately, be our most enduring legacy" (Kolbert, 2014: 268).

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APPENDIX A: INFORMED CONSENT FORM

CONSENT FORM

A strategic management framework for conservation areas.

Dear Mr/Mrs/Miss/Ms _____ Date...../...../2015

NATURE AND PURPOSE OF THE STUDY

The lack of business strategy tools for park managers and the fast-growing nature of the conservation industry has made it important to develop a strategic framework to assist managers of conservation areas in their strategic planning. This research will draw on scientific studies from business as well as conservation fields. The opinions of experts and park managers will be gathered to help develop a preliminary strategic framework. The framework will then be tested with stakeholders and park managers to provide a strategic toolkit for sustainable financing of conservation areas in South Africa.

RESEARCH PROCESS

1. The study requires your participation in a semi-structured face-to-face interview.
2. The interview will be conducted by the researcher, and transcribed by a transcription expert.
3. The interview offers you the opportunity to express your opinion about the current state of the conservation industry and general management issues in the industry. Interviews will be anonymous and only aggregated information will be used.
4. There are no right or wrong answers and all opinions will be valued.
5. You do not need to prepare anything in advance.
6. Once all the interviews are concluded you may be asked to help test the framework.

NOTIFICATION THAT THE INTERVIEW WILL BE TAPE RECORDED

Your attention is drawn to the fact that the interview will be tape-recorded to ensure that valuable information elicited during the interview is captured and the context of the information can be reviewed in detail. Following the interview, the recorded material will be transcribed. You may peruse the transcription of the recording of the interview in which you participated at any time.

CONFIDENTIALITY

The opinions of the respondents are viewed as strictly confidential, and only members of the research team will have access to the information. No data published in dissertations and journals will contain any information through which respondents may be identified. Your anonymity is therefore ensured.

WITHDRAWAL CLAUSE

I understand that I may withdraw from the interview at any time. I,, participate voluntarily until I request otherwise.

POTENTIAL BENEFITS OF THE STUDY

The framework will have International significance and will be valuable to park managers in the private or public arena. The improvement in profitability of National Parks will enable the expansion of areas under management. For the private conservation areas, the framework will give a strategic template to improve profitability in the long term. WWF uses the "one planet perspective" to highlight where the impact will be (WWF, 2014).

Redirect financial flows: The framework will provide an outline for conservation areas to improve strategic planning, leading to greater business success. The improved business success of conservation areas will lead to increased financial flows to conservation business ventures.

Preserve natural capital: Improving the financial sustainability of conservation areas provides an incentive to stay in or enter this competitive industry. In the long term, increased land commitment will ensure the preservation of natural capital.

Equitable resource governance: The impact of the conservation tourism business ventures will be monitored in the framework to make conservation business ventures sustainable.

INFORMATION

If I have any questions concerning the study, I may contact Adriaan Buys on 0825208335 or the supervisor, Prof Mearns, at the College of Agriculture and Environmental Sciences, Florida Campus, Unisa, Tel: 011 471 2973.

CONSENT

I, the undersigned, ... (full name) have read the above information relating to the project and have also heard the verbal version, and declare that I understand it. I have been allowed to discuss relevant aspects of the project with the project leader, and hereby declare that I agree voluntarily to participate in the project.

I indemnify the university and any employee or student of the university against any liability that I may incur during the project.

I further undertake to make no claim against the university in respect of damages to my person or reputation that may be incurred as a result of the project/trial or through the fault of other participants, unless resulting from negligence on the part of the university, its employees or students.

I have received a signed copy of this consent form.

Signature of participant: .....

Signed at ..... on .....

WITNESSES

1 .....

2 .....

APPENDIX B: STAKEHOLDER INTERVIEW GUIDE

Interview Questions

A strategic management framework for conservation areas.

The interview will start with some background information. This section will develop some rapport with the respondent and provide some basic biographical information for classifying the conservation area or other interviews.

Some of the questions will only be relevant to certain interviews. It is suggested that the questions on conservation success are presented to the conservation manager. For Industry KOL's (Key Opinion Leaders) the questions will be limited to the Industry, resources and market questions. Some further questions can be asked to understand what they believe will result in positive conservation and business outcomes.

BIOGRAPHICAL

1. Name - Interviewer to complete
2. Company - interviewer
3. Position in company - interviewer
4. Province - interviewer
5. What business are you in? - Conservation area/ Conservation or industry Body / Intermediary - interviewer
6. Annual turnover of the conservation area
7. Number of Beds (If applicable)
8. Number of staff employed - conservation - other
9. Size of conservation area under management

INDUSTRY ISSUES

1. Is the Industry growing or declining at the moment? Do you think the industry is sustainable in its current form?
2. Is the industry an attractive industry? Why?
3. What are the biggest pressures in the industry for running a conservation area?
4. What is the role of competition in the industry?
5. Do you experience competition between governmental and non-governmental conservation areas?
6. What is the structure of the conservation tourism industry - and where does it fit?

7. Please explain how if at all the following affect your conservation business (Five forces specific questions prompted):

- supplier power,
- customer power
- the threat of new conservation areas,
- How do you separate the idea of competition with overall conservation motive?
- threat substitute tourism products,
- government,
- intermediaries,
- cooperation - symbiotic

RESOURCES PERSPECTIVE

1. Do you think it is more important to look at the business from a competitive perspective mentioned in the previous question or from business resources perspective?
2. How do you plan your resources?
3. What resources do you consider when planning? Explain if prompted - People, conservation area, buildings etc.

THE MARKET

1. Who is your market?
2. Do you know the size of the conservation tourism market?
3. How attractive is the conservation tourism market?
4. Do you target a segment in the market to get a niche?
5. Where do your clients hear about your business?.

STRATEGIC FRAMEWORK

1. What strategic planning process, models or frameworks does your conservation area currently use?
2. Please describe your general planning process - Long term & Short term

BUSINESS SUCCESS

1. What are the main goals for the conservation tourism area?
2. Tourism fund conservation or Conservation attracts clients for a business?
3. Is your conservation area financially sustainable?
4. What are your key success factors?
5. What are your main business challenges?
6. Where does your funding - Start-Up Capital - come from? Any issues related to it?

7. Where does your funding - Running cost - come from? Any issues related to sources of funds?
8. What are the biggest funding driving activities? Explain if asked- hunting, breading, tourism, residential property estates
9. What is the percentage of different funding sources?
10. Where the following fit: conservation, profit surplus, altruistic, sustainability

CONSERVATION SUCCESS

1. Do you actively manage the ecosystem or have limited intervention?
2. What is your conservation objective?
3. How do you manage the conservation area?
4. What are the main issues you encounter in managing the conservation?
5. What is the effect of tourism on the actual conservation asset?
6. How they measure tourism damage to conservation areas?
7. What conservation activities do you conduct?
8. What resources do you have committed to conservation?
9. How do you measure conservation success?
10. Is it part of the business planning or separate?
11. What is the link between funding drive and conservation?
12. Please explain the conservation planning process you follow
13. Is conservation an income generator or an expense?
14. Where do other environmental impact factors like CO2, waste management, sustainability fit in your planning?
15. Do you allow hunting? Do you see it as an issue to mix with conservation?
16. Does the conservation manager get involved in tourism management?

APPENDIX C: ENVIRONMENTAL PERCEPTIONS SURVEY QUESTIONNAIRE

Interview Questions

South African environmental perceptions survey

Firstly, we would like your opinion on the following:

1.1. Your knowledge of environmental issues is

1. Very good
2. Good
3. Adequate
4. Bad
5. Very bad
6. Don't know

1.2. The overall standard of living in South Africa is

1. Very good
2. Good
3. Adequate
4. Bad
5. Very bad
6. Don't know

1.3. The overall state of the natural environment in South Africa is

1. Very good
2. Good
3. Adequate
4. Bad
5. Very bad
6. Don't know

2. South Africa's environment is "clean and green"

1. Strongly agree
2. Agree

3. Neither agree nor disagree
4. Disagree
5. Strongly disagree
6. Don’t know

Please indicate what you think the condition of each of the following is:

3.1. Natural environment in towns & cities is

1. Very good
2. Good
3. Adequate
4. Bad
5. Very bad
6. Don't know

3.2. Air is

1. Very good
2. Good
3. Adequate
4. Bad
5. Very bad
6. Don't know

3.3. Native land and freshwater plants and animals are

1. Very good
2. Good
3. Adequate
4. Bad
5. Very bad
6. Don’t know

3.4. Native bush and forests is

1. Very good
2. Good
3. Adequate
4. Bad
5. Very bad
6. Don't know

3.5. Soils is

1. Very good
2. Good
3. Adequate
4. Bad
5. Very bad
6. Don't know

3.6. Coastal waters and beaches are

1. Very good
2. Good
3. Adequate
4. Bad
5. Very bad
6. Don’t know

3.7. Marine fisheries are

1. Very good
2. Good
3. Adequate
4. Bad
5. Very bad
6. Don’t know

3.8. Rivers and lakes are

1. Very good
2. Good
3. Adequate
4. Bad
5. Very bad
6. Don't know

3.9. Groundwater is

1. Very good
2. Good

3. Adequate
4. Bad
5. Very bad
6. Don't know

3.10. Wetlands is

1. Very good
2. Good
3. Adequate
4. Bad
5. Very bad
6. Don't know

3.11. Natural environment compared to other developed countries is

1. Very good
2. Good
3. Adequate
4. Bad
5. Very bad
6. Don't know

Now we would like your opinion on some of our natural resources. South Africa's...

4.1. Diversity of native land and freshwater plants and animals is

1. Very high
2. High
3. Moderate
4. Low
5. Very Low
6. Don't know

4.2. Amount of native bush and forests is

1. Very high
2. High
3. Moderate
4. Low

5. Very Low
6. Don't know

4.3. Quantity of marine fisheries is

1. Very high
2. High
3. Moderate
4. Low
5. Very Low
6. Don't know

4.4. Area of marine reserves is

1. Very high
2. High
3. Moderate
4. Low
5. Very Low
6. Don't know

4.5. Amount of fresh water in rivers and lakes is

1. Very high
2. High
3. Moderate
4. Low
5. Very Low
6. Don't know

4.6. Availability of groundwater for human use is

1. Very high
2. High
3. Moderate
4. Low
5. Very Low
6. Don't know

4.7. Area of national parks is

1. Very high
2. High
3. Moderate
4. Low
5. Very Low
6. Don't know

4.8. Area of wetlands is

1. Very high
2. High
3. Moderate
4. Low
5. Very Low
6. Don't know

4.9. Availability of parks and reserves in towns and cities is

1. Very high
2. High
3. Moderate
4. Low
5. Very Low
6. Don't know

4.10. Reserves of oil and gas are

1. Very high
2. High
3. Moderate
4. Low
5. Very Low
6. Don't know

What do you think of the management of the following items? Management of South Africa's …

5.1. Pest and weed control is

1. Very good

2. Good
3. Adequate
4. Bad
5. Very bad
6. Don't know

5.2. Solid waste disposal is

1. Very good
2. Good
3. Adequate
4. Bad
5. Very bad
6. Don't know

5.3. Sewage disposal is

1. Very good
2. Good
3. Adequate
4. Bad
5. Very bad
6. Don't know

5.4 Farm effluent and runoff is

1. Very good
2. Good
3. Adequate
4. Bad
5. Very bad
6. Don't know

5.5. Hazardous chemicals use and disposal is

1. Very good
2. Good
3. Adequate
4. Bad
5. Very bad

6. Don't know

5.6. Industrial impact on the environment is

1. Very good
2. Good
3. Adequate
4. Bad
5. Very bad
6. Don't know

And what do you think of the management of each of the following? Currently South Africa's...

6.1. Natural environment in towns and cities is

1. Very well managed
2. Well managed
3. Adequately managed
4. Poorly managed
5. Extremely poorly managed
6. Don't know

6.2. Air quality is

1. Very well managed
2. Well managed
3. Adequately managed
4. Poorly managed
5. Extremely poorly managed
6. Don't know

6.3. Native land and freshwater plants and animals are

1. Very well managed
2. Well managed
3. Adequately managed
4. Poorly managed
5. Extremely poorly managed
6. Don't know

6.4. Native bush and forests are

1. Very well managed
2. Well managed
3. Adequately managed
4. Poorly managed
5. Extremely poorly managed
6. Don't know

6.5. Soils are

1. Very well managed
2. Well managed
3. Adequately managed
4. Poorly managed
5. Extremely poorly managed
6. Don't know

6.6. Coastal waters & beaches are

1. Very well managed
2. Well managed
3. Adequately managed
4. Poorly managed
5. Extremely poorly managed
6. Don't know

6.7. Marine fisheries are

1. Very well managed
2. Well managed
3. Adequately managed
4. Poorly managed
5. Extremely poorly managed
6. Don't know

6.8. Marine reserves are

1. Very well managed
2. Well managed

3. Adequately managed
4. Poorly managed
5. Extremely poorly managed
6. Don't know

6.9. Rivers and lakes are

1. Very well managed
2. Well managed
3. Adequately managed
4. Poorly managed
5. Extremely poorly managed
6. Don't know

6.10. Groundwater is

1. Very well managed
2. Well managed
3. Adequately managed
4. Poorly managed
5. Extremely poorly managed
6. Don't know

6.11. National parks are

1. Very well managed
2. Well managed
3. Adequately managed
4. Poorly managed
5. Extremely poorly managed
6. Don't know

6.12. Wetlands are

1. Very well managed
2. Well managed
3. Adequately managed
4. Poorly managed
5. Extremely poorly managed
6. Don't know

6.13 Natural environment compared to other developed countries is

1. Very well managed
2. Well managed
3. Adequately managed
4. Poorly managed
5. Extremely poorly managed
6. Don't know

Please say what you think are the main causes of damage, if any, to each of the following parts of the South Africa environment by selecting up to 3 causes on each row for each of the following:

7. Air

A. Motor vehicles and transport
B. Household waste and emissions
C. Industrial activities
D. Pests and weeds
E. Farming
F. Forestry
G. Urban development
H. Mining
I. Sewage and stormwater
J. Tourism
K. Commercial fishing
L. Recreational fishing
M. Dumping of solid waste
N. Hazardous chemicals
O. Other

8. Native land & freshwater plants & animals

A. Motor vehicles and transport
B. Household waste and emissions
C. Industrial activities
D. Pests and weeds
E. Farming
F. Forestry

G. Urban development
H. Mining
I. Sewage and stormwater
J. Tourism
K. Commercial fishing
L. Recreational fishing
M. Dumping of solid waste
N. Hazardous chemicals
O. Other

9. Native forests & bush

A. Motor vehicles and transport
B. Household waste and emissions
C. Industrial activities
D. Pests and weeds
E. Farming
F. Forestry
G. Urban development
H. Mining
I. Sewage and stormwater
J. Tourism
K. Commercial fishing
L. Recreational fishing
M. Dumping of solid waste
N. Hazardous chemicals
O. Other

10. Soils

A. Motor vehicles and transport
B. Household waste and emissions
C. Industrial activities
D. Pests and weeds
E. Farming
F. Forestry
G. Urban development
H. Mining

I. Sewage and stormwater
J. Tourism
K. Commercial fishing
L. Recreational fishing
M. Dumping of solid waste
N. Hazardous chemicals
O. Other

11. Beaches & coastal waters

A. Motor vehicles and transport
B. Household waste and emissions
C. Industrial activities
D. Pests and weeds
E. Farming
F. Forestry
G. Urban development
H. Mining
I. Sewage and stormwater
J. Tourism
K. Commercial fishing
L. Recreational fishing
M. Dumping of solid waste
N. Hazardous chemicals
O. Other

12. Marine fisheries

A. Motor vehicles and transport
B. Household waste and emissions
C. Industrial activities
D. Pests and weeds
E. Farming
F. Forestry
G. Urban development
H. Mining
I. Sewage and stormwater
J. Tourism

K. Commercial fishing
L. Recreational fishing
M. Dumping of solid waste
N. Hazardous chemicals
O. Other

13. Marine reserves

A. Motor vehicles and transport
B. Household waste and emissions
C. Industrial activities
D. Pests and weeds
E. Farming
F. Forestry
G. Urban development
H. Mining
I. Sewage and stormwater
J. Tourism
K. Commercial fishing
L. Recreational fishing
M. Dumping of solid waste
N. Hazardous chemicals
O. Other

14. Fresh waters

A. Motor vehicles and transport
B. Household waste and emissions
C. Industrial activities
D. Pests and weeds
E. Farming
F. Forestry
G. Urban development
H. Mining
I. Sewage and stormwater
J. Tourism
K. Commercial fishing
L. Recreational fishing

M. Dumping of solid waste
N. Hazardous chemicals
O. Other

15. National parks

A. Motor vehicles and transport
B. Household waste and emissions
C. Industrial activities
D. Pests and weeds
E. Farming
F. Forestry
G. Urban development
H. Mining
I. Sewage and stormwater
J. Tourism
K. Commercial fishing
L. Recreational fishing
M. Dumping of solid waste
N. Hazardous chemicals
O. Other

16. Wetlands

A. Motor vehicles and transport
B. Household waste and emissions
C. Industrial activities
D. Pests and weeds
E. Farming
F. Forestry
G. Urban development
H. Mining
I. Sewage and stormwater
J. Tourism
K. Commercial fishing
L. Recreational fishing
M. Dumping of solid waste
N. Hazardous chemicals

O. Other

Personal Actions

In the last 12 months have you have done any of the following? Please provide an answer for each statement

17.1. Reduced, or limited your use of electricity

1. Yes
2. Regularly
3. No
4. Don't know

17.2. Reduced, or limited your use of fresh water

1. Yes
2. Regularly
3. No
4. Don't know

17.3 Visited a marine reserve

1. Yes
2. Regularly
3. No
4. Don't know

17.4. Visited a national park or public conservation area.

1. Yes
2. Regularly
3. No
4. Don't know

17.5 Visited a private nature reserve or conservation area.

1. Yes
2. Regularly
3. No
4. Don't know

17.6 Bought products that are marketed as environmentally friendly

1. Yes
2. Regularly
3. No
4. Don't know

17.7 Recycled household waste

1. Yes
2. Regularly
3. No
4. Don't know

17.8 Composted garden and/or household waste

1. Yes
2. Regularly
3. No
4. Don't know

17.9 Have been involved in a project to improve the natural environment

1. Yes
2. Regularly
3. No
4. Don't know

17.10 Grown some of your vegetables

1. Yes
2. Regularly
3. No
4. Don't know

17.11 Obtained information about the environment from any source

1. Yes
2. Regularly
3. No
4. Don't know

17.12 Used a company who advertises to be focused on the environment's products or services because they say they are environmentally focussed.

1. Yes
2. Regularly
3. No
4. Don't know

17.13 Participated in an environmental organisation

1. Yes
2. Regularly
3. No
4. Don't know

17.14 Commuted by buses or trains

1. Yes
2. Regularly
3. No
4. Don't know

17.15. Been an active member of a club or group that restores and/or replants natural environments

1. Yes
2. Regularly
3. No
4. Don't know

17.16 Made a financial donation to a non-governmental environmental organisation (e.g., Forest and Bird)

1. Yes
2. Regularly
3. No
4. Don't know

Most Important Environmental Issues

18. What do you think is the most important environmental issue facing South Africa today?

[Open-ended question]

19. Why did you choose this issue?

[Open-ended question]

20. What do you think is the most important environmental issue facing the world today?

[Open-ended question]

21. Why did you choose this issue?

[Open-ended question]

About You

Finally, some questions about you

22. Are you:

A. Male
B. Female

23. Including yourself, how many people live in your household?

A. 1
B. 2
C. 3
D. 4
E. 5
F. 6
G. 7
H. 8
I. 9
J. 10
K. 11
L. 12
M. 13
N. 14
O. 15
P. More than 15 (please tell us how many)

24. In what year were you born?

[Open-ended responses]

25. Are you:

A. Black
B. Coloured
C. White
D. Indian
E. Other
F. Prefer not to say

26. In which of the following regions do you live?

A. Gauteng
B. Western Cape
C. Kwazulu-Natal
D. Eastern Cape
E. Northern Cape
F. Free State
G. Mpumalanga
H. Limpopo
I. North West
J. Outside South Africa

27. Do you live in:

A. Rural Area
B. Town (more than 15,000 people)
C. City (major urban area)

28. What is the highest level of formal education you have completed?

A. Primary school
B. High school, without matric
C. High school, with matric
D. Trade/technical qualification or similar
E. Undergraduate diploma/certificate
F. Bachelors degree

G. Postgraduate

29. Please tick one of the following that best describes your current situation

A. Paid employment, working 30 or more hours per week
B. Paid employment, working less than 30 hours per week
C. Unemployed
D. Retired
E. Unpaid voluntary work
F. Student
G. Home duties
H. Other

30. What industry do you work in, or if you are not currently working, what industry did you last work in?

A. Agriculture, hunting and forestry
B. Fishing
C. Mining and quarrying
D. Manufacturing
E. Electricity, gas and water supply
F. Construction
G. Wholesale and retail trade
H. Hotels and restaurants
I. Transport, storage and communications
J. Financial intermediation
K. Real Estate, renting and business activities
L. Public administration and defence
M. Education
N. Health and social work
O. Other community, social and personal service activities

31.. What is your occupation, or what was your occupation when you were working?

A. Clerical or sales employee
B. Semi-skilled worker
C. Technical or skilled worker
D. Business manager or executive
E. Business owner or self-employed

F. Teacher, nurse, police or other trained service worker
G. Professional or senior government official
H. Labourer, manual, agricultural or domestic worker
I. Farm owner or manager
J. Have never been in paid employment
K. Other (please tell us what that is)

32. What is your annual income from all sources before tax?

A. Loss
B. R0 to R100,000
C. R100,001 to R200,000
D. R200,001 to R300,000
E. R300,001 to R400,000
F. R400,001 to R500,000
G. R500,001 to R700,000
H. R700,001 to R1,000,000
I. R1,000,001 to R1,100,000
J. R1,100,001 to R1,200,000
K. R1,200,001 to R1,300,000
L. R1,300,001 to R1,400,000
M. R1,400,001 to R1,500,000
N. R1,500,001 or more
O. I'd Prefer not to say

Final Comments

Thanks for all of your views, those are all the questions we have.

33. Would you like us to let you know any of the published results of this survey?

A. Yes
B. No